This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

The modern angler

Otter

Digitized by Google

C. FARLOW & CO.,

LIMITED,

191, STRAND, LONDON, W.C.

F **le.**

"**F**

ops,

GR se heavy
prove ıtest im-
produ w able to
are c the rods
teste oroughly
The **ıt 28oz.**

"**F** **lod.**

THI with the
the b) receive
giving equently
the ro e play of
made They are
impro ve every
Green selected

Illustrated Price List gratis and Post Free.

C. FARLOW & CO., LTD.,

191, **ONDON, W.C.**

Digitized by Google

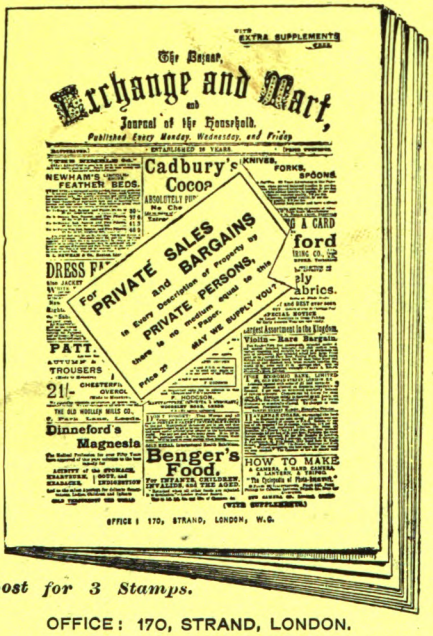
EXTRA SUPPLEMENTS *Well Illustrated.*
The Ladies', each Month, 1st Wed.; The Philatelists', 2nd Wed.; The Home, 3rd Wed.

BARGAINS

in Everything and Anything are readily secured through *The Bazaar, Exchange and Mart* Newspaper, which is used by Private Persons for disposing of things they no longer require. **THE** paper for Buying, Selling, and Exchanging by Private Persons.

TELEGRAMS: "BAZAAR, LONDON."

2d.
at
Newsagents.



2d.
at
Bookstalls.

By post for 3 Stamps.

OFFICE: 170, STRAND, LONDON.

ADVICE

on every possible subject may be obtained on application to *The Bazaar, Exchange and Mart*, which has the largest staff of Eminent Experts of any paper in the Kingdom, and these Experts freely advise its readers. **THE** paper *par excellence* for Amateurs.

EXTRA SUPPLEMENTS—*continued.*
The Cyclists', each Month, 1st Mon.; The Sportsman's, 2nd Mon.; The Garden, 3rd Mon.; The Dog Owners', Last Mon.

Digitized by Google

Digitized by Google

THE MODERN ANGLER.

Digitized by Google

Cat. M. A. C. Oct. '09

ALFRED,

Digitized by Google

Digitized by Google

A LARGE TAKE OF PIKE.

(By Lord St. Vincent and Dr. Spurgin at Wollaton Park, in 1897).

Digitized by Google

THE

MODERN ANGLER.

A PRACTICAL HANDBOOK ON ALL KINDS OF ANGLING.

By "OTTER,"

Author of "A Complete Guide to Spinning and Trolling" &c., &c.

New Edition.

WITH NUMEROUS ILLUSTRATIONS.

LONDON

L. UPCOTT GILL, 170, STRAND, W.C.

1898.

Digitized by Google

F126.15.10 HARVARD COLLEGE LIBRARY
GIFT OF
DANIEL B. FEARING
30 JUNE 1915

Deacidified
DLC
11/92

LONDON:
L. UPCOTT GILL, LONDON AND COUNTY PRINTING WORKS,
DRURY LANE, W.C.

Digitized by Google

PREFACE.

THE great success of the previous editions of the "MODERN ANGLER" has induced the Author to practically re-write a considerable part of it, so as to bring it up to date. It is perfectly certain that all the reading in the world, without practice and observation, will never make an angler. It is one thing to read "how to angle," but another thing to accomplish the angling successfully. The Author has endeavoured in the present edition to make the instructions as lucid as possible, giving, where necessary, diagrams of the tackle to be used, so that the learner may readily understand the *modus operandi*. It is only by attention to details, and by knowing when, how, and where to fish, that the tyro will become a master of the art.

The Author begs to acknowledge his indebtedness to Messrs. Farlow, Limited, for the illustrations on pages 19, 20, 21, 22, 25, 26, and 90; and also to Messrs. Alfred and Son, Limited, for certain other illustrations.

Digitized by Google

A. CARTER & CO.,

Fishing Rod and Tackle Manufacturers to

T.I.M. The Emperor and Empress of Russia.
H.R.H. The Duke of York.
H.R.H. The Duke of Saxe Coburg Gotha.
H.I.H. The Grand Duke Michael Alexandrovich.
H.I.H. The Grand Duke Alexander Michaelovich.

137, St. John's Street Road,

AND

1, 2, and 3, Rosebery Avenue.

Timber Stores: 11, Merlin's Place,

LONDON, E.C.

Established over 200 years.

Acknowledged by Sportsmen and Press to be the leading House in the Trade.

235 Pike in three weeks on Lake Windermere.

2 doz. Pike in one day on the Norfolk Broads.

The best Spinning Bait ever invented.

Send for our New Illustrated Catalogue, it will save you from 30 to 50 per cent.

What the Press says.

Land and Water: "About half the usual prices."
Daily Telegraph: "Carters have earned a reputation for good honest work."
Fishing Gazette: "Carters do one of the largest trades in the world."
Sporting Life: "Better or more workmanlike goods were never seen."
People: "Carters' is the best house in London."
Asian, Calcutta: "Carters put stores of all kinds to shame with their low prices."

Digitized by Google

CONTENTS.

CHAP.		PAGE
I.	The Antiquity of Angling	1
II.	The Angler's Requisites	18
III.	The Classification of Fishes	37
IV.	Salmon	39
V.	Trout, Charr, etc.	51
VI.	Grayling, or Umber	77
VII.	Pike	80
VIII.	Perch and Pope	107
IX.	Barbel	115
X.	Bream	124
XI.	Carp	127
XII.	Tench	131
XIII.	Chub	134
XIV.	Roach, Rudd, and Dace	138
XV.	Eels, Lampreys, and Lamperns	149
XVI.	Gudgeon, Bleak, Loach, Minnows, etc.	153
XVII.	Sea-Fishing	161
	Index	181

Digitized by Google

ANGLERS IN IRELAND

AND ANY OTHER PART OF THE WORLD,

Can obtain every requisite of the best quality from

Jos. BRADDELL & SON, BELFAST

(ESTABLISHED 87 YEARS).

Manufacturers of Every Description of River, Lake, and Sea Fishing Tackle.
Importers of Silkworm Gut. Salmon and Trout Flies for every river.
Specials Tied.

New Illustrated Price List, containing Revised Fishery Man, Calendar of Close Time, &c., Post Free, **2d.**

Inventors and Sole Manufacturers of "Flexible Grip" Rods, The "Ulster" Silk Lines, Improved Line Drier, Combined Cast and Tackle Box, Th "Egeria," "Quickstep," and "Shore" Sea Fishing Baskets, Th "Semper Flexilis" Brand of Waterproof Fishing Goods, The "Perfect" Brogues, Goat's Hair Sea Flies, Improved Self-Fastening Drift Leads, &c. Established 1811.

FISHING TACKLE MANUFACTORY,

CASTLE PLACE (*Next Door to the Ulster Club*)

and CASTLE CHAMBERS,

National Telephone No. 525.

BELFAST.

Telegraphic Address, "BRADDELL, BELFAST."

Book of the All-Round Angler. Angling in both Fresh and Salt Water. In Four Divisions, as named below. By J. BICKERDYKE. With over 220 Engravings. 5s. 6d., *by post* 5s. 10d.

Angling for Coarse Fish. Bottom Fishing, according to the Methods in use on the Thames, Trent, Norfolk Broads, and elsewhere. Illustrated. 1s., *by post* 1s. 2d.

Angling for Pike. New Edition, revised and enlarged. Profusely Illustrated. *In paper, price* 1s., *by post* 1s. 2d.; *cloth*, 2s. (*uncut*), *by post* 2s. 3d.

Angling for Game Fish. The Methods of Fishing for Salmon; Moorland, Chalk Stream, and Thames Trout; Grayling and Char. Illustrated. 1s. 6d., *by post* 1s. 9d.

Angling in Salt Water. Sea Fishing with Rod and Line, from the Shore, Piers, Jetties, Rocks, and from Boats. Over 50 Engravings. *In paper, price* 1s., *by post* 1s. 2d.; *cloth*, 2s. (*uncut*), *by post* 2s. 3d.

Sea-Fishing for Amateurs. Practical Instructions to Visitors at Seaside Places for Catching Sea-Fish from Pier-heads, Shore, or Boats, principally by means of Hand-Lines, with a very useful List of Fishing Stations, the Fish to be caught there, and the Best Seasons. By F. HUDSON. Illustrated. 1s., *by post* 1s. 2d.

Sea-Fishing on the English Coast. The Art of Making and Using Sea Tackle, with a full account of the methods in vogue during each month of the year, and a Detailed Guide to all the most Popular Watering Places on the English Coast. By F. G. AFLALO. Illustrated. 2s. 6d., *by post* 2s. 9d.

—: LONDON :—

L. UPCOTT GILL, 170, STRAND, W.C.

Digitized by Google

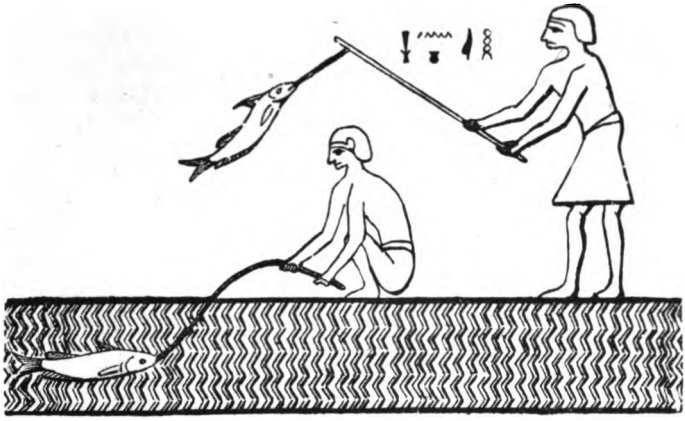


FIG. 1.—SCULPTURE FROM BENI-HASSAN.

THE MODERN ANGLER.

CHAPTER I.

THE ANTIQUITY OF ANGLING.

WITH regard to the origin of angling, and its connection, as an art, with the dawn and progress of civilisation, nothing is known definitely. Before, however, we touch on its origin, it might be as well to trace some of the earliest notices of fish. In our English version of the Scriptural account of the Creation, we have a special mention of "Great whales, and every living creature that moveth, which the waters brought forth abundantly, after their kind," though it is somewhat singular that "Adam gave names to all cattle, and to the fowl of the air, and to every beast of the field," but *fish* are not mentioned. I think the earliest mention of a special fish is, "Canst thou draw out leviathan with an hook?" in Job xli. 1, though some writers consider that the name "leviathan" is here applied to the crocodile and not

Digitized by Google

to a fish. Moses, writing about 1500 B.C., gave directions, in Lev. xi., as to fish which were to be considered clean or unclean, but beyond noting that the latter class comprised those without fins and scales, nothing is specially named. Amongst ancient nations, we find that the Egyptians made that sacred which they did not care to eat: this rather looked as if the pagan gods were only given the worst fish by their priests, who thus exercised their influence to prevent that being eaten which they believed to be unfit for food. Inasmuch as the Hebrew law-giver had just come from Egypt, where fish without scales and fins were accounted decidedly unwholesome, it appears as if

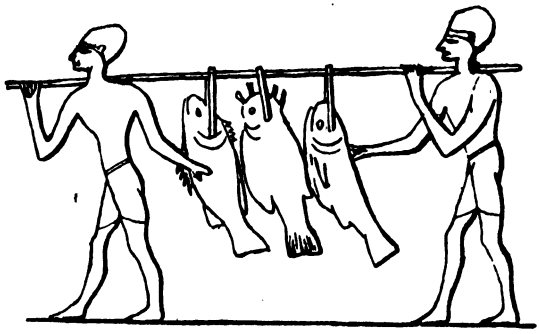


FIG. 2.—SCULPTURE FROM A TOMB IN THE PYRAMIDS.

the priests of the olden time made their selection in accordance with common sense.

The well-known Egyptian sculptures from Beni-Hassan, Thebes, and the Pyramids, the date of which is believed to be about 2000 B.C. (some centuries before the time of Moses), have many illustrations of angling; the ancient Egyptians were evidently tolerably expert in the art, and fishing was a favourite amusement of the rich as well as a profitable occupation for the poor.

Our illustrations are from some of the old Egyptian sculptures; in one of them, from Beni-Hassan (Fig. 1), two anglers appear to be having good sport with a leger; though from the

Digitized by Google

unceremonious manner in which one of them is landing what appears to be a fine specimen of the *Mormyrus oxyrhynchus*, scientific "play" was not much studied, so long as the fish was landed. Wilkinson, however, says that he considers these fish to be the *Shilbeh* or *Arabrab*. The Mormyrus appears to have been a nocturnal-feeding fish, of which some have organs capable of producing electricity; the modern Egyptian name is *Mizdeh*. In the second illustration, which is from a tomb at the Pyramids, the successful anglers are returning with three specimen fish, evidently of great weight. On another sculpture is shown the

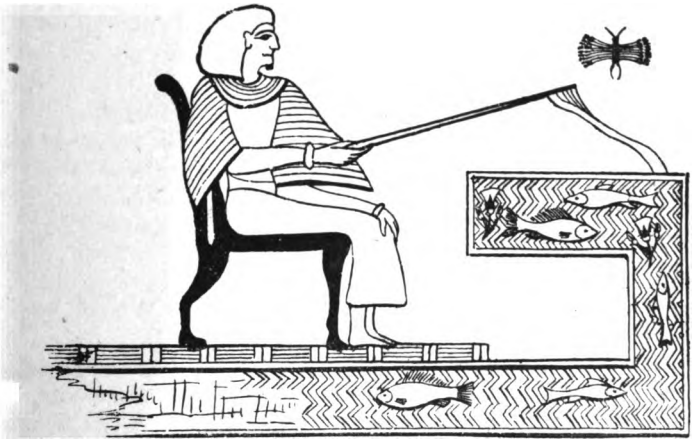


FIG. 3.—SCULPTURE AT THEBES.

method of preparing and drying fish, which are remarkably similar in appearance to the "kippers" of the present day. This, however, is not so much to our purpose as a capital illustration from a sculpture at Thebes (Fig. 3), showing a wealthy Egyptian fly-fishing from a punt or raft, evidently "taking it remarkably easy."

The oldest of the old-world legends have to do with fish. Polynesia believes that it was brought up out of the primæval ocean on a fish-hook, having been itself a fish; America, that the sole tenant of the great waste of waters was a turtle, which

Digitized by Google

dived for it into the depths of diluvian chaos, for which reason possibly some of the tribes of American Indians have the turtle as their *totem*, or family god; whilst the Red Indians place the Pike, Trout, and Sturgeon in the same honourable position. It is curious to notice that in our own land, in past times, the same fish were also highly esteemed.

There is a great variety of curious fish-lore in the Mahometan traditions; thus, sea-fish were, at first, unlawful food, as the name of Allah could not be pronounced over them before they died. But, it is said, Mahomet remedied this by blessing a knife which he cast into the sea; by this all the fish were blessed, and had their throats cut before they came to shore, the large openings behind the gills being the wounds thus miraculously made, without killing the fish.

One of the great religious epics of Asia is the legend of the fish-incarnation of Vishnu. It says that the god had changed himself into a small fish, and, going to the sage, Menu, craved protection against the larger creatures of the water. In pity, the sage placed him in a jar, in which he grew large enough to fill it in a single night, so he was transferred to a pond, with the same result. Then he was placed in the Ganges (as a specimen fish), and thence he was removed to the sea, when he made himself known to the sage as a god, and warned him that in seven days a flood would overwhelm the earth, but that the sage was to build a ship and enter it, with seven other sages, and a pair of every living creature, with seeds of all kinds of plants. When the flood subsided, the god again appeared to Menu, who, making fast a rope to the fish, was towed to Naubandha, where his ship rested. This legend is older by some centuries than the Biblical narrative of Noah and the Flood, though even here, there is no means of identifying the peculiar fish into which Vishnu was said to have changed himself.

Going back to the sacred writings, in addition to the Book of Jonah (i. 17), written about 826 B.C., where we read of the "great fish" which swallowed the prophet, we find in Amos iv. 2, written 787 B.C., another mention of fish-hooks; also in Isaiah xix. 8, written 714 B.C., and in Habakkuk i. 15 (626 B.C.), there are special references to the "angle." But it is very

Digitized by Google

remarkable that in the New Testament, Saint Peter and his comrades, who were professional fishermen, should have omitted to name any of the species with which some of the miracles were identified. The monks, however, insist that it was in the mouth of a haddock that Saint Peter found the tribute money, the peculiar marks of the thumb and finger of the saint left on the fish and inherited by the whole of its descendants being pointed out as a proof; though, of course, the very fact of his catching a sea-fish, like the haddock, which is, we believe, not even found in the Mediterranean, in the fresh-water Lake of Gennesareth, would add another miracle to the original one already recorded.

Returning to our text, which is an inquiry into the antiquity of the art of angling, we find that although fish were worshipped as gods and eaten as food, whilst the sculptures of Egypt carry back the practice of angling nearly 4000 years, beyond that we are lost in obscurity, and we can only reason by analogy as to how it was first discovered.

The local conditions under which various races of people live have very much to do with the food which they require. Therefore, whilst in the inland plains or mountain regions, hunting would be principally followed for the purpose of obtaining food, on the sea-coast and in parts where rivers abound, the waters would naturally become a very important source of food supply. It has been by some suggested that the adoption of a fish diet may have had an influence in the evolution of that mental superiority which distinguishes man from the lower animals, the phosphorus abounding in fish being an important element in the nervous tissues—Professor Agassiz says that fish-food feeds the brain, and adds to the intellectual powers generally. Thus it may have happened that the commencement of the art of angling was due to the discovery by primæval man of shell-fish left on the sea-shore, or at the mouth of a tidal river; whilst the capture of fish left by the receding tide in the pools, would lead him on to the invention of some means by which he might capture the larger denizens of the deep. All that can be said with certainty on the point is, that, owing to the relatively low proportion of brain to body in fish, they would be more easily caught than other animals when required for food.

Digitized by Google

The question as to whether fishing or hunting would be first practised, would of course depend much on the local surroundings of the particular people; but it is more probable that man's earliest state being one of comparative weakness, his courage would only be called into existence by the development of his intellectual faculties. He probably saw fish feeding on each other, and would reason that there might be a means of entangling or catching them by means of their food. The first idea might be a flake of flint, fastened by the middle to a line of vegetable fibres, and hanging suspended at right angles to the line, in a similar manner to what is termed a "sniggling" needle used for eels (A, Fig. 4): this, when baited, would hang straight with the line, but when swallowed by the fish, a sharp jerk would bring the flint at right angles with the line, thus preventing the fish from ejecting it again, and enabling its captor to drag it to shore. Might not the heat arising from the friction in polishing and sharpening these flint and stone implements, have taught man the original mode of producing fire? Having found out that by drying fish it could be utilised for future use, might not the discoverer of fire have proceeded to improve on the primitive style of drying by the application of the heat? Then, in process of time, the difference of tastes might have caused the dissolution of tribes, which would move to other parts, and eventually form fresh nations. The curious analogies occurring in the legends and traditions belonging to comparatively ignorant savages, living in various parts of the world, and the relics which prove the existence in those places at some far remote epoch of a much higher state of civilisation, point to a time in the far-off past when there must have been some species of emigration from a common stock.

Amongst the prehistoric implements discovered in various parts of the world, are numberless specimens of flint-flakes which have been described as knives, but with equal probability may have been that substitute for a hook which has been just described. A flint-flake, fastened to a bone or wood stem, might also have been the original of our present hook (B, Fig. 4).

Then, from constant observation of long-billed birds, like the heron, spearing fish, might have been evolved the idea of

Digitized by Google

employing the spear and harpoon, having heads of flint or stone, which are still used by the Esquimaux and other tribes. On the banks of the American Delaware, quantities of stone lance and arrow-heads and spears have been discovered. The Delaware and Iroquois Indians used bows and arrows, harpoons and hooks for fishing, and from the habit of pursuing fish would naturally arise the desire to follow the quarry in or upon its native element. The sight of an animal swimming, or floating on a log of wood, would give the idea of how to follow on the water a fish which had been struck with a spear, but had escaped. Then would be invented the primitive sort of harpoons and lines, such as are used even now by the tribes in the extreme north and south of the globe; and, of course, in the modern improved varieties of harpoons, grains, and other similar implements by the whalers of the present day.

It is a moot point as to whether the hook, the net, or the fishing-spear was earliest used for the purpose of securing the harvest of the waters. Although, as I have pointed out, the flint flake hanging cross-wise on the line has great claims to priority, still I somewhat incline to the belief that the fishing-spear, formed by a sharpened flint at the end of a stick, has good grounds for disputing the pre-eminence. As one reason in favour of this idea, ancient Egyptian sculptures show the use of fish-spears, the pattern generally delineated being a *bident*, or two-pronged spear with single barbs, and the instrument being often shown as having prongs of unequal length; these forks were very slender, light, and sharp in construction.

It should be noticed that whichever was the earliest method, hook-fishing or angling, net-fishing or netting, and the use of the fish-spear or fork, were all practised concurrently somewhere or other.

The two-pronged fish-spear was considered by the ancients to be the sceptre, or proper emblem of authority, of Pluto (or Hades, from the name of the Kingdom over which he ruled, generally spoken of as the infernal regions). Neptune, the Poseidon of the Greeks, the god of fishermen, fishing, and the waters of the earth, carried, on the other hand, a *trident*, or fish-spear of three prongs—some saying because water has three

Digitized by Google

forms, liquid, solid, and vaporous; others, that the three tines represented the seas, the rivers, and the lakes; and others, that it meant water *still*, water *flowing*, and water *disturbed*, or stormy. This wonderful fishing implement was further capable of causing earthquakes, raising and stilling storms, and was also the means whereby Neptune—by striking the ground—produced the very first horse, when contending with Minerva for superiority. If we could only now possess Neptune's trident, we could doubtless cause the fish to "come on," when they were otherwise conspicuous by their absence!

The ancient Greeks tell of Glaucus—a kind of demigod—that, counting his catch whilst fishing one day, he noticed that as the fish were lying on the bank, after eating a certain herb growing there, they had the power of jumping back into their native element, to the serious lightening of his creel. Glaucus, tasting some of this wonderful herb or plant, jumped into the water himself—a warning to anglers to beware of *plants* of any description.

The indentation in the side of the flint to form a barb, whether for use as a hook, or as a point for a harpoon, would be necessary to prevent its withdrawal. In the flint arrow-heads of the drifts of Ireland and Scotland, and indeed of almost all deposits containing stone weapons, are capital examples of the barb. All the spears, harpoons, or arrows, from the Esquimaux to the Dyaks of Borneo, prove its widespread manufacture and use; fish-hooks from any part of the world, and of whatever material, show it in the majority of instances, it being the simplest arrangement that suggested itself when the necessity arose for an implement that would not easily withdraw from the object it had pierced: hence the invention of the barbed hook.

The Tahitians, New Zealanders, and others used mother-of-pearl carved into the rough shape of a hook, which also served as a bait. In the Islands of the South Pacific, hooks and baits are made from the pearl-bearing shell of the *Avicula margaritifera*. Other materials, besides flint and stone, were used for hooks; the bifurcated stems of a hard-wood tree formed a capital substitute, as did also bone, specimens of which have been discovered in the ancient lake dwellings of Switzerland, while the

Digitized by Google

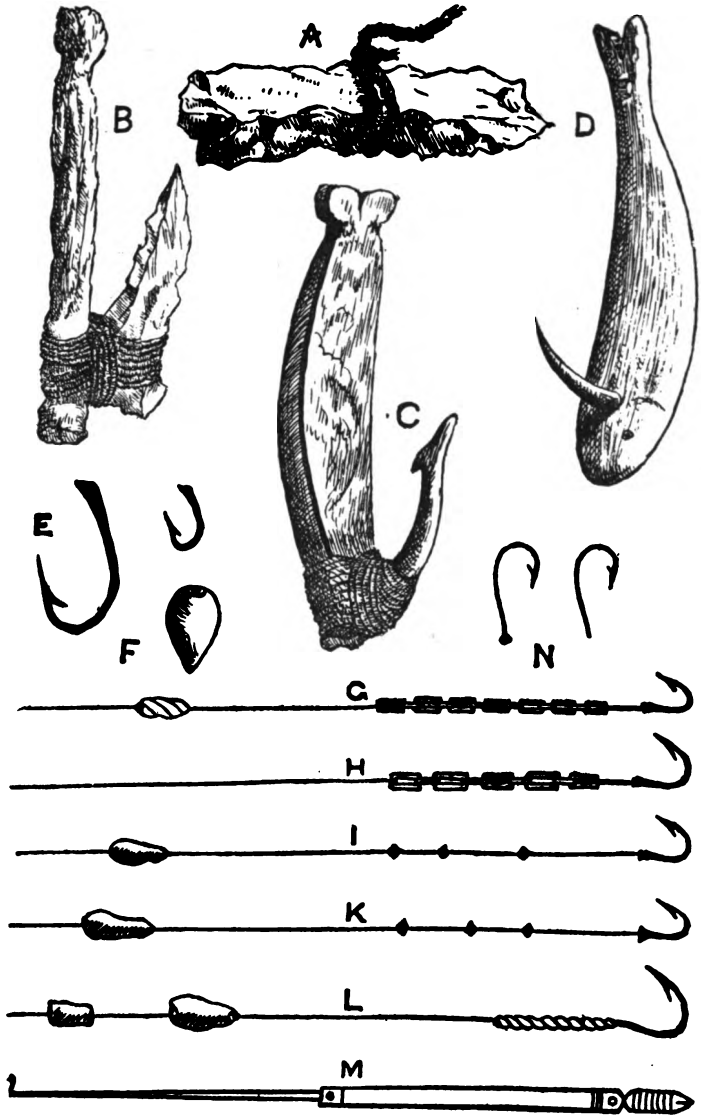


FIG. 4.—ANCIENT HOOKS, ETC.

Digitized by Google

thorn-hooks are used even at the present time by some of the tribes of Indians and Esquimaux. The peculiarly shaped thorn of the acacia, with a portion of the stem, is used on the River Amazon, in South America, by the natives.

Then we come to the bronze age, and the iron age; so that we find a very gradual progression from the roughest forms in flint and stone, shell, wood, bone, bronze or copper and iron, down to the exquisitely tempered steel hook of the present day. Many specimens have been found in which each of these stages of progression fit into each other, showing compound hooks of flint and wood, shell and wood (C, Fig. 4), wood and bone, such as are used by the American Indians of the Clyoquot and Makah tribes for cod-fishing, also bone and iron (D), as well as a compound bait of stone, bone, and iron. Some of these flint hooks have been tested, and have been found sufficiently strong to land a fish of fifteen pounds weight. The following is a descriptive list of the hooks, etc., shown in Fig. 4, parts of which are reproduced from "The Boke of St. Albans":—

A.—Prehistoric flint gorge. From the Lovett collection.

B.—Prehistoric flint and wood hook (restored).

C.—Pearl and wood hook, found in use on the discovery of the Fiji Islands. (Lovett collection.)

D.—Bone fish-shaped hook with iron boat-nail for barb, found in use amongst the Esquimaux, by Arctic travellers.

E.—Hooks, *temp.* 1476. Dame Juliana Berners.

F.—Float. Dame Juliana Berners.

G.—The ground lyne rennynge. Dame Juliana Berners.

H.—The grounde lyne lyenge. Dame Juliana Berners.

I.—The flote lyne. Dame Juliana Berners.

K.—The lyne for Perch or Tench. Dame Juliana Berners.

L.—The lyne for a Pyke—Plumbe: Corke armyd wyth wyre, Dame Juliana Berners.

M.—Rod in two pieces. Dame Juliana Berners.

N.—Hooks, *temp.* 1653. Lauson's Notes on "I.D."

That certain families of the earth must have greatly degenerated from the civilisation of their ancestors, is clear from the writings

Digitized by Google

of Arrian, who lived in the second century, in the time of the Emperor Adrian. He described in his *Indica*, a nation of chthyophagi, living on the border of the Persian Gulf. Fish was their principal food, either raw, dried, or ground into a sort of fish-meal—with this they fed themselves and their cattle; they made their clothing from fish-skins, and lived in huts made from fish skeletons and bones. They manufactured nets from the inner bark of palm trees, having no flax or hemp, and with these nets they could cover a quarter of a mile of sea.

Compare with this description of these comparative savages, the following (translated) extract from the *Halieutica*, written by Oppian, A.D. 198, describing an angling excursion of the Emperor Caracalla in verses, for which that monarch paid at the rate of a gold aureolus (a coin equal in value to about fifteen shillings) per line:—

"A bite, hurrah! the length'ning line extends,
Above the tugging fish the arch'd reed bends;
He struggles hard, and noble sport will yield,
My liege, ere wearied out, he quits the field.
See how he swims, up, down, and now athwart
The rapid stream—now pausing as in thought;
And now you force him from the azure deep;
He mounts, he bends, and with resilient leap
Bounds into air! there see the dangler twirl,
Convulsive start, hang, curl, again uncurl,
Caper once more like young Terpsichore,
In giddy gyres, above the sounding sea,
Till near'd, you seize the prize with steady wrist,
And grasp at last the bright funambulist."

The same writer evidently alludes to the use of a gorge-bait when, speaking of the angler, he says—

"He holds the labrax, and beneath his head,
Adjusts with care an oblong shape of lead,
Named from its form a dolphin; plumb'd with this,
The bait shoots headlong through the blue abyss.
The bright decoy a living creature seems,

Digitized by Google

As, now on this side, now on that, it gleams,
Till some dark form across its passage flit,
Pouches the lure, and finds the biter's bit."

Ælian, writing about A.D. 225 respecting a neighbouring nation, refers to them as being skilful fly-fishermen. The translation by Badham is as follows :—

"The Macedonians who live on the banks of the River Astreus, which flows midway between Berea and Thessalonica, are in the habit of catching a particular fish in that river by means of a fly called hippurus. A very singular insect it is; bold and troublesome like all its kind, in size a hornet, marked like a wasp, and buzzing like a bee. These flies are the prey of certain speckled fish, which no sooner see them settling on the water than they glide gently beneath, and before the hippurus is aware, snap at and carry him as suddenly under the stream as an eagle will seize and bear aloft a goose from a farmyard, or a wolf take a sheep from its fold. The predilection of these speckled fish for their prey, though familiarly known to all who inhabit the district, does not induce the angler to attempt their capture by impaling the living insect, which is of so delicate a nature that the least handling would spoil its colour and appearance, and render it unfit as a lure. But adepts in the sport have contrived a taking device, '*captiosa quædam machinatio*,' to circumvent them; for which purpose they invest the body of the hook with purple wool, and having adjusted two wings of a waxy colour, so as to form an exact imitation of the hippurus, they drop these abstruse cheats gently down the stream. The scaly pursuers, who hastily rise and expect nothing less than a dainty bait, snap the decoy, and are immediately fixed to the hook."

The latter part is somewhat different in Westwood and Satchell's translation, which runs as follows :—

"The fisherman cannot use the natural fly, for the touch of a human hand rubs off its delicate bloom and destroys its wings; therefore they overreach the fish by an artful device. Round the hook they twist scarlet wool, and two wings are secured on this wool from the feathers which grow under the wattles of a cock, brought up to the proper colour with wax. The rod they use is

Digitized by Google

six feet in length, and the line is of the same length. Then the angler lets fall his lure. The fish, attracted by its colour, and excited, draws close, and judging from its beautiful appearance that it will obtain a marvellous banquet, forthwith opens its mouth, but is caught by the hook, and bitter indeed is the feast it enjoys, inasmuch as it is captured."

Ælian describes one method of taking eels practised by the ancients, which is somewhat curious:—"The artful eeler (Badham, *trans.*) pitches upon a spot favourable for his purpose at the turn of a stream, and lets down from where he stands, on the high bank, some cubits' length of the intestines of a sheep, which, carried down by the current, is eddied and whirled about, and presently perceived by the eels, one of whom, adventurously gobbling some inches at the nether end, endeavours to drag the whole away. The angler, perceiving this, applies the other end, which is fixed to a long tubular reed serving in lieu of a fishing rod, to his mouth, and blows through it into the gut. The gut presently swells, and the fish next receiving the air into his mouth, swells too, and being unable to extricate his teeth, is lugged out, adhering to the inflated intestine."

It is somewhat singular, looking back to these and other ancient writers (such as Homer, who, in the "Odyssey," has numerous allusions to fishing with hook and net, Suetonius, who recorded the fact that the Emperor Nero used to fish with a purple net having gold decorations, Columella, Varro and Pliny), who gave valuable information on the subject of fish culture in that day, all proving that with a refined state of civilisation, the art of angling was in high esteem in ancient Rome and Greece, that, nevertheless, all this was swept away on the invasion of Italy by the Huns, Goths, and Vandals, which caused this pursuit gradually to disappear as an art, and to be practised only to supply the wants of those dwelling on the banks of the rivers.

The ancients had curious notions on the subject of fish-breeding. Herodotus, speaking of the gregarious fish found in Egypt, says that "they frequent the lagunes, whence, at the season of breeding, they proceed in shoals to the sea. The males lead the way, and drop their milt as they go, while the females, following close behind, eagerly swallow it down. From this they conceive,

Digitized by Google

and when, after passing some time in the sea, they begin to be in spawn, the whole shoal sets off on its return to its ancient haunts. Now, however, it is no longer the males, but the females, who take the lead—they swim in front in a body, and do exactly as the males did before, dropping, little by little, their grains as they go, while the males in the rear devour the grains, each one of which is a fish." Aristotle, however, exposed the absurdity of this idea.

From the time of Ælian, at the beginning of the third century, to that of Dame Juliana Berners, who wrote "The Boke of St. Albans," in 1476, fly-fishing is not mentioned, though from her description of angling with a "dubbe" it appears to have been well known and practised. Between these two writers came Ausonius, in the fourth century, and Cassianus Bassus in the beginning of the tenth century, who wrote on fishing and the necessary baits, giving the following as a capital attraction for fish:—"Take three limpets, and having taken out the fish, inscribe on the shells the words, 'The God of armies,' and you will immediately see the fish come to the same place in a surprising manner."

Hawkins suggests that possibly, when writing her "Treatyse on the Art of Fysshynge with an Angle," the Dame had monkish manuscripts on the art by her, to which she referred for some part of her information. These, however, have disappeared; but Dame Berners, in speaking of the "redde worme" as being a good "bayte" for a "Carpe," says that she has little personal knowledge of it, but what she writes she has "herde saye of persones credyble and also founde wryten in bokes of credence," thus acknowledging her indebtedness to some other earlier writers. These, as suggested by Hawkins, were in all probability the monks, who had to study the art as a matter of necessity, for the purpose of providing food for their particular monastery on fast days. In referring to some of the recipes of the time, she says quaintly, "For ye can not brynge an hoke in to a fyssh mouth wythout a bayte," a proposition with which we cordially agree. Further, "Whan ye have take a grete fysshe vndo the mawe and what ye find therin make that your bayte, for it is your beste." With regard to "maggotes" (gentles), we are told

Digitized by Google

that they are to be fed with sheep's tallow and a cake made of flour and honey so as to fatten them. "And whan ye have clensyed them with sonde in a bagge of blanket, kepte hote vnder your gowne or other warm thyng, two houres or thre, then ben they best, and redy to angle wyth."

"The Boke of St. Albans," with its quaint cuts of rod, hooks, and tackle, shows the state at which the art had arrived in the time of Dame Juliana Berners; the curious sketch of an angler with the tub of water in which to preserve his specimen fish, is doubtless familiar to the majority of anglers. Other drawings show the style of hook used at that time, eighteen sizes being given in the original, and as there were evidently no hook-makers then, each angler had to make his own; therefore Dame Berners instructs the novice how to make them from "nedlys" (needles), giving drawings of the necessary tools, and especially directing him, when tying them to the line, to "loke that your line lye euermore wythin your hokys: & not without. Thenne kytte of the lynys end & the threde as nyghe as ye maye: sauynge the frette."

Dame Berners' ideas of a rod sound very peculiar to modern anglers. She directs her reader to procure a "fayr staffe of a fadom and an halfe long; arme grete of hazyll; willowe; or ashe." This forms the butt, and has to be bored out with hot irons, to receive the top, or "croppe," as she terms it. The "croppe" is to be made from a "yerde of hazyll," joined to a length of "blackethorne, crabbe tree, medeler or Jenypre," the Dame giving special injunctions to cut off these between "Myghelmas and Candylmas," and when finished they are to be shaved into a shapely form. "Thenne vyrell the staffe at both endes wyth longe hopis of yren," the butt having a "pyke in the nether ende fastened wyth a rennynge vyce; to take in & out your croppe." Dame Berners is evidently well satisfied with the result of her labour in rod-making, for she concludes with these remarks:—"Thus shall ye make you a rodde soo preuy that ye mays walke therwyth: and there shall noo man wyte where abowte ye goo. It wool be lyghte and full nymbyll to fysshe wyth at your luste. And for the more redynesse loo here a fygure" (M, Fig. 4). From her measurements it was about eighteen feet long

Digitized by Google

when fastened together, so that even if carried in two pieces, or if the "croppe" were to be carried inside the butt, like a modern walking-stick rod, still it would require rather a stretch of the imagination to suppose that a nine-feet pole "as thick as thy arm" could be made so "preuy" (pretty) that no one should know where the bearer of it was going.

The last edition of Dame Berners' work under its proper title was published in 1596, but in 1614 a modernised edition was brought out under a somewhat different heading; this was a year later than the celebrated "Secrets of Angling," by "I. D.," who appears by the entry in Stationers' Hall to have been John Dennys. Gervase Markham's work was published in 1635, and in 1651 Thomas Barker's "Art of Angling" was brought out, the first edition of Walton's "Compleat Angler" being published in 1653. The "Secrets of Angling" was a poetical work, which contained many valuable hints, and it was further enlarged by the quaint notes appended by W. Lauson in the 1653 edition. There is no doubt that Walton was greatly indebted to these previous writings for much that he says, especially with reference to the invention of the art of angling, which he attributes to the fabulous Belus or Baal, the Sun-god; his selection of flies was derived from Barker's work, and he again had apparently drawn upon the previous writings of Dame Juliana Berners. However, in the later edition, when Cotton wrote the second part to Walton's book, the list of flies was revised, and with Cotton's directions to the fly-fishing tyro, this formed an admirable sequel to Izaak Walton's charming pastoral idyll.

With regard to the materials from which lines were made, although, as Walton says, horse-hair was the principal, still even before his time, other substances, such as flax, hemp, and silk, were used, to which "I. D." refers in his poetical work. The chief material for lines was evidently hair, though at that time experiments were being made to discover something stronger whilst equally indistinct in the water. Pepys says in his Diary, 18th March, 1667, "This day Mr. Cæsar told me a pretty experiment of his angling with a minikin, a gutt-string varnished over, which keeps it from swelling, and is beyond any hair for strength and smallness. The secret I like mightily." At a later date it

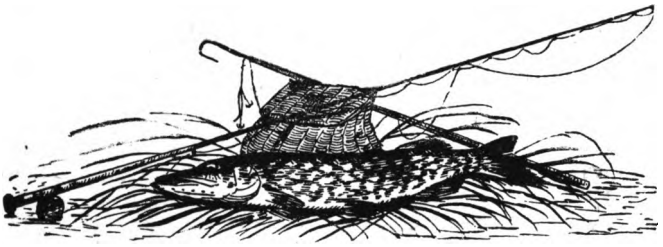
Digitized by Google

was found that the gut of a silkworm, as at present used, could be drawn out into a transparent line; and although nothing definite can be traced as to the exact date, this is believed to have been introduced for angling purposes about 1750.

The Tahitians used lines made from a species of *Hibiscus*, also from a sort of mountain nettle, and the fibres of the cocoanut. The New Zealanders employed dog's hair and wool for the purpose, whilst the natives of the Fiji Islands plaited their lines from human hair. We have a sample of one of these Fijian hair lines; it was cut from a line of very great length and strength, that had been in the same family for many years, each succeeding generation plaiting on an additional length to the family line. Other curious substances have been used in different parts of the world, though the improvements in the manufacture of silk-worm gut leave little to be desired in the shape of material from which to make bottom-lines, strong and practically invisible in the water.

The best gut comes from Murcia, in Spain; the silkworms are bred in the cottages of the villagers, this being their only occupation in some of the villages, whilst others perform in addition the first processes in making the gut. The worms are raised on a bed of reeds some three or four feet from the floor of the room, and are fed on mulberry leaves, care being taken to remove all dead or sickly worms. When they are preparing to spin their cocoons, small branches are placed over the bed, on to which they crawl; they are then removed and placed in vinegar for six hours, and afterwards into clear water. The worm is then broken in two pieces, and one, two, and sometimes three, little sacs are exposed; each of these, being carefully pulled out to its fullest extent, forms a "length of gut," which being, later on, tied with others in bunches, is hung up in the garden to dry. The gut-finishers buy it from the villagers by weight, and steep it in hot water with a little soap and soda, which softens the outer skin and causes it to peel off easily, when the gut is again washed, cleaned and hung up to dry. It is then polished with wash-leather, sorted into sizes and qualities, tied in "hanks of 100, and afterwards into "bundles" of 1000, 5,000, and 10,000 for sale.

Digitized by Google



CHAPTER II.

THE ANGLER'S REQUISITES.

In this chapter, I do not propose to describe the various classes of rods, etc., in use at the present time, because, whilst one angler would not for a moment think of fishing for anything but Salmon, Trout, or Grayling, dozens more are perfectly content with Pike, whilst hundreds more are satisfied with Roach or Dace; therefore, I reserve a description of each class of rod for the chapter devoted to the fish for which it is intended.

Winches. — With regard to winches, the size and style should be in some proportion to the description of fish. The following patterns may be taken as the best types :—

Fig. 5 is a bronze check winch, having the handle fastened to the front plate and rotating with it, thus doing away with the necessity of a projecting arm to the handle—as in Fig. 9—round which the line is apt to catch with the slightest puff of wind, most probably just when you have hooked a good fish. There are variations in the material of which this type of winch is made, such as ebonite, aluminium, gun-metal, etc.

Fig. 6 is the "Moscrop" patent winch, of which the inventor says :—"The framework is without screws, being in one casting; it can be taken to pieces and put together again in ten seconds by the fingers alone. There is only one plate on the handle side

Digitized by Google

instead of three, consequently there is no liability to a host of mishaps. It holds the line to the full diameter (nearly); a 3in. reel holds as much as an ordinary 3½in. It is ventilated; has an adjustable drag to the 3½in. and upwards (with or without to the small size). Strength, simplicity. In case of accident, one can get at the damage. In order to take it to pieces, hold the reel in the left hand, insert the thumb and first finger between the bars, exerting pressure on the revolving part outwards. Then press in the small catches with the nails of the thumb and first finger of the right hand—the revolving part should then come

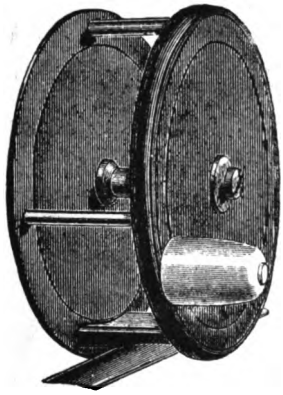


FIG. 5.—BRONZE CHECK WINCH

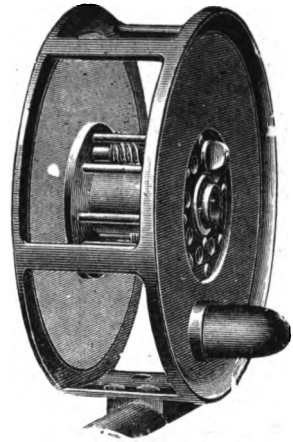


FIG. 6.—"MOSCROP" WINCH.

out. As the working parts are so easily got at, it is as well to keep them clean and oiled occasionally—not too much oil."

Fig. 7 is an improved wood winch; the inner plate of the barrel (printed light in the figure) is of brass, running in a brass collar, thus it never swells when wet; it can be taken off for cleaning and oiling by touching a spring. On the reverse side is a removable check, thrown into or out of action by moving a button. This is the best type of wood winch, similar ones being made in ebonite, but without the brass side to the barrel;

Digitized by Google

and, of course, the ordinary cheap wood winches running on an iron spindle.

The "Simplex" reel (Fig. 8) combines all the advantages of the best reels made on the Nottingham or centre-pin principle. It is extremely light, runs freely and splendidly, and can be readily adapted or applied to any sort of fishing. It possesses the optional check on the back plate, and in an instant the interior may be examined by the removal of the fastening which is seen on the front or revolving plate. The whole mechanism is simplicity itself. The greatest advantage is the guard. In

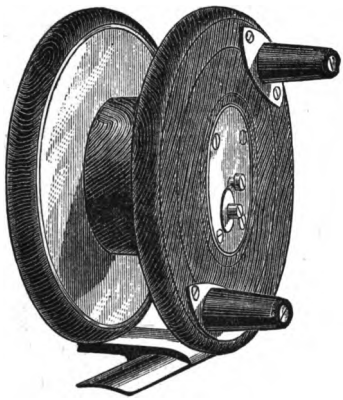


FIG. 7.—IMPROVED WOOD WINCH.

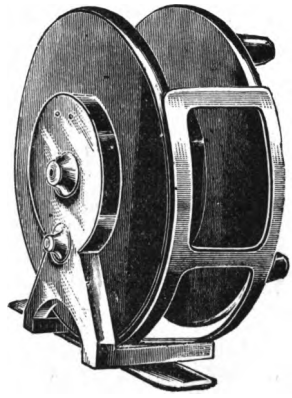


FIG. 8.—THE 'SIMPLEX" REEL.

using, the angler has only to bring pressure to bear on the guard with his finger, to stop the maddest rush of the heaviest Salmon, Pike, or Barbel.

Fig. 9 is the ordinary brass winch, with or without a check; but, as before observed, the objection to this is the chance of the line catching round the handle; on the other hand, these winches are very cheap.

Lines.—Following on the winch, we come to the running-lines, which are made from a variety of materials. For fly-fishing, they may be of plaited silk and hair, tapered to a point, which is

Digitized by Google

of great assistance in casting; or of plaited silk, waterproofed and prepared, also tapered; these latter throw rather straighter, as they are somewhat heavier, in proportion to the size, than the silk and hair. Plaited silk lines, properly waterproofed, are best for every other description of angling, the size being in proportion to the style of fishing adopted. Of these there are several qualities, but, like everything else, the best is, in the end, the cheapest.

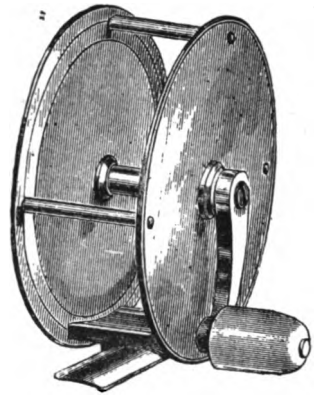


FIG. 9.—ORDINARY BRASS WINCH.

Some anglers prefer an undressed plaited silk line for throwing from the winch in spinning, but these hold the water very much, and cling to the rod. Then for a cheaper class of line, there are tanned plaited hemp, which is very useful for sea-fishing, and the spun lines of silk, hemp, etc.

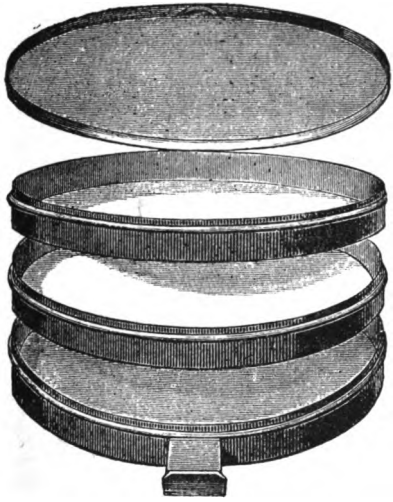


FIG. 10.—BOX FOR CASTS AND FLIES, WITH THREE DIVISIONS.

Tackle-boxes.—Flies, hooks, artificial baits, etc., will be dealt with later; but to hold them, proper cases will be necessary.

Fig. 10 is a very useful shape for holding casts and flies, having three divisions. It is made of japanned tin, dark outside and white inside, opening with

Digitized by Google

hinges into separate compartments, whilst the catch in front makes all secure when shut up.

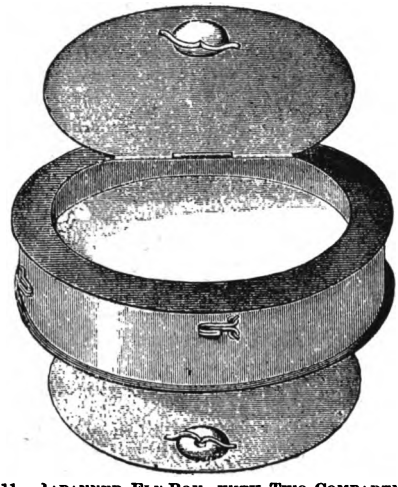


FIG. 11.—JAPANNED FLY-BOX, WITH TWO COMPARTMENTS.

FIG. 12.—FLY-BOX WITH STRIPS OF CORK.

Fig. 11 is also of japanned tin, but with a lid at both sides, a division being between, so as to make two compartments the

Digitized by Google

full diameter of the box. In one can be held flies, and in the other, casts. Round the outside is felt, so that a cast of flies not in use can be wound round the box, and the loop at the

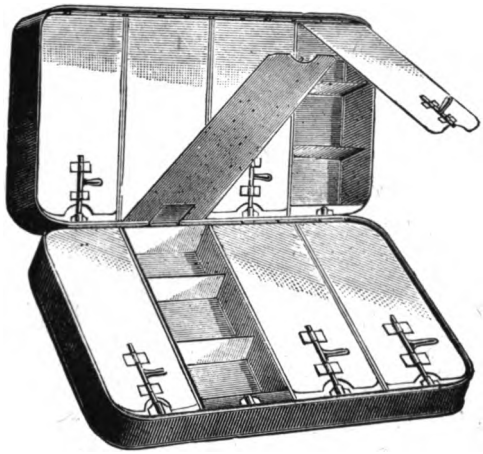


FIG. 13.—BOX FOR KEEPING EYED-FLIES SEPARATELY.

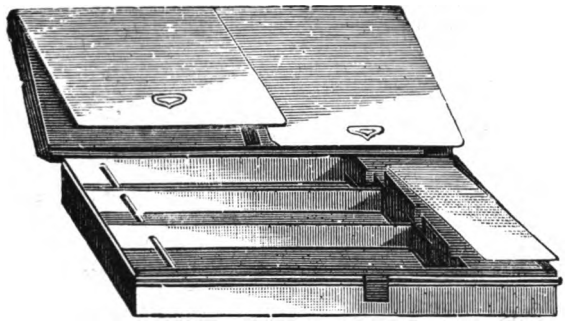


FIG. 14.—JAPANNED CASE FOR ARTIFICIAL BAITS, TRACES, ETC.

end of the cast fastened on one of the small hooks sewn on the felt, into which the points of the hooks can be inserted wherever

Digitized by Google

they may happen to come. These boxes are about four or five inches in diameter.

For holding the eyed flies, a tin box will be found to be the most useful. Fig. 12 is a patent box, lined with strips of cork in which the hooks are inserted. Another pattern (Fig. 13) consists of a box of similar shape, but divided into a dozen or more compartments with hinged covers; in these the flies can be carried very conveniently, the patterns being separated.

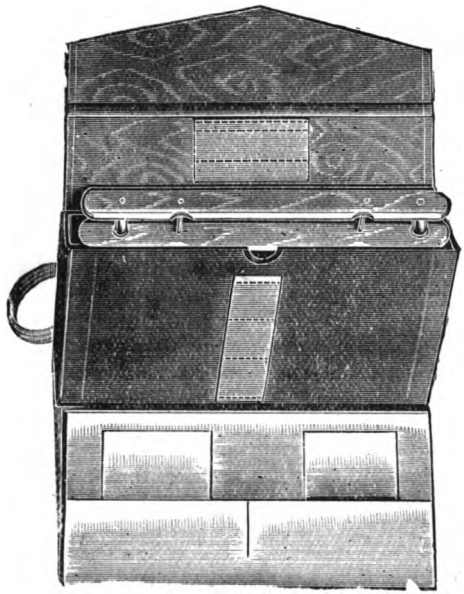


FIG. 15.—ORDINARY TACKLE CASE.

For flies on gut, a leather covered fly-book is necessary, having parchment leaves to hold the flies, and pockets for the gut casts.

Fig. 14 is a pattern of japanned case for holding artificial baits, traces, etc. There are a number of shapes and sizes of these cases, and, of course, in selecting one, the tyro will be guided by the quantity of tackle he is selecting, as it is better to err

Digitized by Google

somewhat on the right side as regards size of case, than to have one in which everything is cramped and entangled. They are also made with trays to hold a four-line reel of lines with floats, ready for use, spare hooks, etc.

Fig. 15 is the ordinary tackle case, with reel of lines, implements such as scissors and pliers, pocket with spare hooks, etc.

A Landing-net is necessary for almost every description of fish, and should be made so as to fold up with the rod, or pack

FIG. 16.—LANDING-NET.

in the haversack. Fig. 16 shows one made with a joint, so as to fold the net down on to the handle. This is very useful to the fly-fisher, as it has a small hook fastened to the handle, by which it can be hung on the strap of the basket or haversack.

Fig. 17 is one of several forms of collapsible landing-rings, which are made of nickelled steel, phosphor bronze, or whalebone, with a fastening joint to keep them in an oval or round

FIG. 17.—COLLAPSIBLE LANDING-RING.

form when in use. These are very handy for travelling, and can be tied up with the rod. The ordinary jointed rings have three hinges, and, of course, are much cheaper, but take a little more room in packing.

Digitized by Google

Gaffs.—For large fish, such as Salmon and Pike, a gaff will be most useful. Fig. 18 is that known as the "Brunton" gaff;

FIG. 18.—THE "BRUNTON" GAFF.

it is tested to an opening strain of 56lb., and has a bayonet point, which goes directly into the fish with very little pull, the

FIG. 19.—GAFF WITH TELESCOPIC HANDLE

ordinary round point occasionally missing if it strikes against a bone. Fig. 19 is a gaff with a telescopic metal handle; it is very

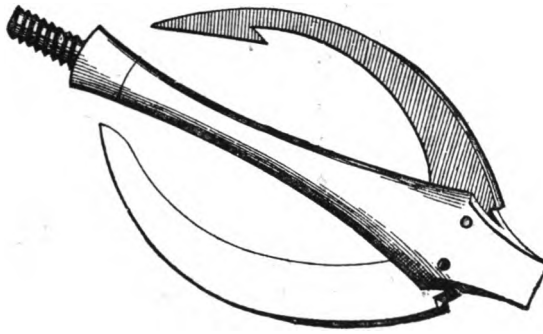


FIG. 20.—FOLDING GAFF.

compact, occupying but little room in the pocket or bag. Fig. 20 is a folding gaff, having a knife at the back, which is extremely

Digitized by Google

useful when the fly or bait is fouled in the weeds or on a bough; this screws on to the ordinary landing handle.

A clearing ring and a small drag are very convenient articles for clearing the hook from weeds or rocks at the bottom of the

FIG. 21.—HAVERSACK.

FIG. 22.—HAVERSACK.

river. A disgorger is a long, narrow piece of ivory, bone or metal, having a forked end, which is pushed against the hook and is very handy for disengaging it (*see* also page 99).

Haversack.—The angler should have, in addition, a large fish-bag, or haversack, with a division, so as to form two pockets, the outer one for fish, and the inner one for tackle, etc. (Figs. 21 and 22). It will be found more convenient than the ordinary pannier, which always seems to be in the way; whilst the haversack, fitting close to the side, will hold more, and when not in use, can be rolled up and carried in the pocket.

FIG. 23.—PANNIER.

Baskets.—There is a very convenient form of basket for Roach-fishermen. It is of English manufacture, and is sufficiently strong to afford a firm seat for the angler; the front of the basket has a door opening forward, through which the fish are dropped

Digitized by Google

inside. There is also a second lid, on which tackle or lunch can be carried

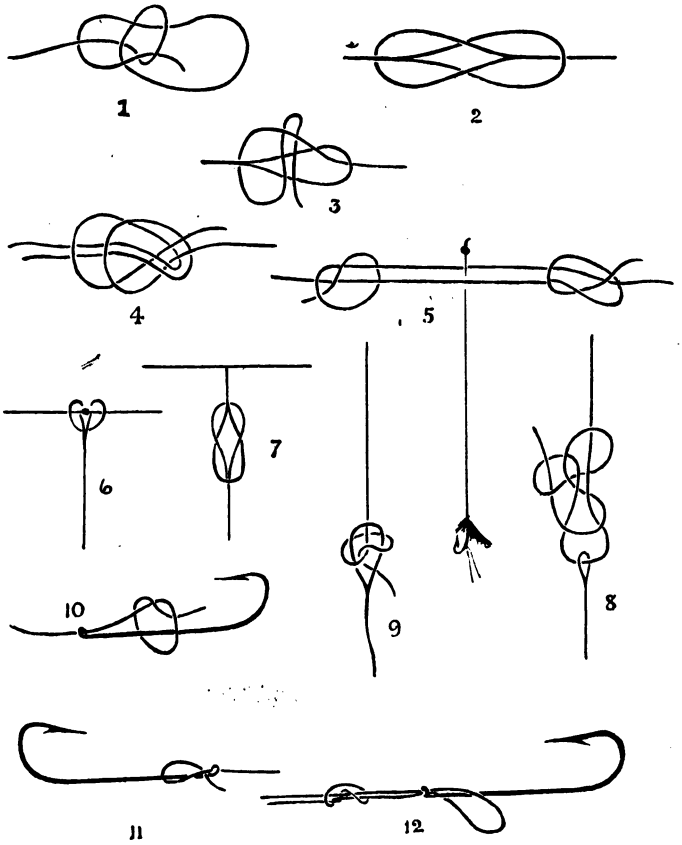


FIG. 24.—FISHERMEN'S KNOTS, ETC.

Fig. 23 is the ordinary form of pannier generally used by fly-fishermen, but, as I have before observed, it is more cumbersome

Digitized by Google

than the haversack, though there are still many anglers who prefer it.

Knots.—In Fig. 24 some of the most useful knots and fastenings for lines and hooks are shown:—

No. 1 is the "Bowline" knot, which is a most convenient one to tie when a slip-knot is wanted.

No. 2 is for joining lines by means of loops.

No. 3 is for fastening the running line to the trace. When drawn tight this is a very secure knot, which can, however, be instantly undone by pulling the point of the line.

No. 4 is for joining a broken line.

No. 5 is another method of joining a broken line by means of two slip-knots. When these are pulled tight and drawn together, it forms a very safe joining, and is much used in fly-casts, the drop-fly being attached as in the sketch; when it is required to change this, it is easily accomplished by drawing the knots apart.

No. 6 is another method of attaching a drop-fly.

No. 7 is for attaching the hooks to paternosters.

Nos. 8 and 9 are extremely serviceable knots for large Salmon flies, etc., having gut loops.

Nos. 10, 11, and 12, which are shown on bare hooks for the sake of clearness, will explain themselves, No. 11 being the simplest and best for eyed-hook flies.

Always soak the gut well in water to soften it before attempting to knot it, otherwise it is certain to crack and break.

Hooks.—In the first place, no economy is so expensive in the end, or so delusive, as that of investing in cheap hooks. There is, in angling, no branch of more direct importance than this particular one. If you cannot have confidence in your hook, of what avail is the most perfect skill or manipulation, or the most artistically finished rod or winch? And yet it is astonishing what an amount of trash is annually palmed upon the novice in the shape of hooks. Of course, if he *will* have them cheap, the unscrupulous dealer will supply him at almost any price he may choose to name, because he pays his hook-maker in proportion. I have been shown these hooks, which appear

Digitized by Google

very well finished to the eye; but try them, dear novice, and what is the result? They double up like lead wire, or break like tinder.

Probably very few, if any, of my readers have ever been privileged to inspect a hook-factory. Each department undertakes its own special work, which is kept quite distinct and separate. In the first department the wire is simply straightened, and cut into the required lengths. In the next, these receive the barbs, which are simply cut with a sharp knife. If the barb is cut too deep, it is apt to break off when the point comes in contact with a bone; and if it is not cut deep enough, it will probably cause the loss of a fish through not being "rank" enough to retain its hold. After the wires have been barbed, they are filed at the points and sharpened; in the case of best hooks they are also filed taper at the other or shank end, so that they may have a neater appearance when whipped to the gut or gimp. In the next department they receive their shape, and make their first appearance as hooks. As there is a "pattern" to be formed for every shape upon which the wire is bent, my readers can imagine there is some slight amount of brain-work required even in making such a common thing as a fish-hook. After the hooks have been shaped, they are hardened by being first heated in trays in a furnace till "white hot," and then slid into a bath of oil to cool. They are now perfectly brittle, and after being cleaned from the oil, are ready to be passed to the "temperer." The tempering is performed in a fine sand bath over a branch of the furnace; and the instant that this important functionary considers they have arrived at the proper stage, they are shot into a sieve to separate them from the sand, and are turned out on a table to cool. Having been tempered, the small sizes are shaken in bags with oil and emery for about an hour to clean; after this they are washed in soapsuds, dried in sawdust, then shaken in another clean bag of sawdust till perfectly bright. The blueing is performed in a sand-bath the same as the tempering, and they are turned out as before to cool. The large hooks are cleaned in barrels of water only, which are turned rapidly by machinery, the friction of the hooks against each other

Digitized by Google

scouring them clean; and the polish is produced in a similar manner — in dry barrels with sawdust. In the case of "Limerick" and other hooks which are usually japanned, this is done after the tempering process. A large quantity are warmed gently in a metal basin, and a small quantity of black japan being poured on them, they are quickly manipulated with a pair of forks, which prevents the japan from becoming clotty.

It is evident that, given *good* steel wire, everything depends upon the temperer. If the hook is not sufficiently tempered, off goes the point directly a bone is struck; it may be only the point, though a break generally occurs where the barb is cut in. But if a fish is missed, the angler should at once examine the hook, as, if the fine point is gone, only a rough blunt point will be left, with which he must be extremely lucky if he catches anything at all. A touch or two with a small needle-file will very often repair this damage. But then, again, a hook may be over-tempered; that is, too much of the hardening may be taken out, and then the hook becomes a perfect nuisance. The wire may be good, but all the spring is gone; and the first time you strike a fish your hook goes out straight, and away goes your fish.

Now with regard to the shape of hook which is most useful for each description of angling. For the principal patterns, see Fig. 25, all other shapes being a modification of one or other of these. No. 1 (Limerick), No. 4 (Lip), and No. 5 (Carlisle), are flat; No. 2 (Kirby), No. 3 (Sneck), and No. 6 (Kendal), are twisted slightly sideways. This twist should be very slight; for as the point is turned away from the direction from which the force is applied, by so much is the penetrating power diminished; but on the other hand, if it has no twist at all, but is perfectly flat, a fish may possibly take it in his mouth, and the hook may be pulled out in striking without so much as pricking him. Try this with a flat and a slightly twisted hook between two pieces of card; you will easily draw out the one, but not the other. So much for the hooking properties, speaking generally.

Next, as regards shape. For Salmon flies I think there is

Digitized by Google

no better hook than a Limerick, of the shape as drawn. For Trout flies, if of large size, the Limerick is also good, but for medium or small flies the Sneck is to be preferred, and with this you will seldom miss a fish. The point should be very fine and sharp, but not too long, and the barb should not be too rank, or it will require too hard a strike to drive it home, the length of the shank being in proportion to the fly. For very small midges a very round Carlisle hook is much used.

The shapes mostly used in Pike-fishing are the Round, the Sneck, and the Lip. The Lip-hook, as its name denotes, is principally used, in spinning-tackle, to close the mouth of the bait, which is effectually accomplished by the sharp angle. This is a very useful shape in sundry other portions of Jack-tackle

FIG 25.—THE PRINCIPAL PATTERNS OF HOOKS.

for attaching the bait in various ways; but the point is too rank for hooking a fish; and as from their position they are more visible on the flight, so should they be rather small than large. The hooks intended for catching should be either Sneck or Round, whether as single hooks, or brazed together in the form of triangles.

For general all-round work in bottom-angling, there is hardly a better shape than the short-shanked Kendal. This has a slight twist to one side, but it is infinitely to be preferred to the Sneck as a worm-hook. Any hook with a sharp angle is to be avoided for worm-fishing if the worm has to be threadled up the hook; for in passing it round the corner or angle, the worm is almost certain to be damaged, or if not, it has a very unnatural appearance; whilst, with a round-bend, the worm is quickly and neatly

Digitized by Google

slipped up the hook, and presents a better appearance in the water.

For Roach-fishing there are several shapes in use. The short-shanked Sneck has many admirers, and is principally used for gentles and paste; but I prefer a round-bend of my own pattern, having the point slightly pointing in, rather fine in the wire, yet strong enough for a heavy fish, and I rarely miss a fish with it. The shanks of the greater number of Roach-hooks are much too short to strike in properly. With these, on striking, the whole strain is thrown on the *inside* of the point, instead of on the *point* itself; and instead of the point being forced in, the hook is pulled open, if it is of fine wire. This will be at once seen if the point of an ordinary short-shanked Roach-hook is fixed in the edge of a strong card; observe the position taken by the hook on pulling the gut. If the wire of the hook is so coarse that it will not spring, notice what a much harder stroke is required to attain the desired result of burying the barb. In Fig. 26, No. 1 is a short Sneck, and No. 2 a short Round. Both these shapes are greatly in demand, being short in the shank, so as not to require too much covering; but in consequence of the peculiar position they must assume when the sharp, peculiar stroke is given, they can neither of them be considered as good. In No. 3, the shank is a little longer, and the point is rounded in, pointing towards the direction whence the stroke is given. I think it will at once be conceded that this must be the best shape for all practical purposes, either for paste, gentles, or worms; for the last, however, I like a longer shank, as it can be baited more easily, and keeps the worm better in shape. There is another objection to these extra short shanks which I think has hardly been sufficiently noticed, and it is this: the fine gut or hair to which the hook is attached, must be weakened very considerably at the point of the hook-shank by the constant cross-way jerk, which will damage it in a very much

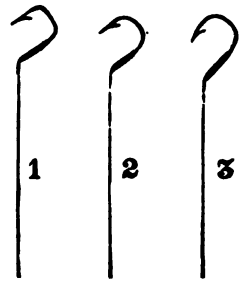


FIG. 26.—ROACH-HOOKS.

Digitized by Google

shorter space of time than by a straighter pull, besides loosening the whipping.

Baits.—The best gentles are those obtained from bullock's liver; cut several gashes in it, and then hang up till well fly-blown, placing under it a tub containing damp sand, to catch the gentles as they fall.

The old English form of the word worm was *wrim*; the Anglo-Saxon, *wyrm*; Icelandic, *ormr*; while the Latin is, as is well known, *vermis*, hence the name for the whole Order, *Vermes*, to which the worms used by anglers belong, under the "family" name of *Lumbricidæ*. Of their habits and natural history generally, notwithstanding Darwin's admirable researches, much remains to be learnt. The worms used as bait are mentioned hereunder.

The Lob or Lobed worm is said by Chambers (erroneously) in his Dictionary to be the same as the sea-beach Lug-worm, which is, however, sometimes called by the same name. The Lob worm has many synonyms, and is identical with the Garden or Dew worm, the maiden Lob being the same worm before reaching its full growth and maturity: the lobed tail is, however, particularly well developed. The prominent characteristics of the Lob worm are: a pale and very flattened or lobed tail; the head is very pointed, and of a darker colour than the rest of the worm, sometimes almost black; the whole worm, but especially the head, is covered with a tough and comparatively firm skin. As is well known, they may be gathered from lawns and garden-grounds in large quantities after rain. The next worm we must mention is the Marsh or meadow worm, which has a more cylindrical character than the last. It is generally found in dark, rich, and moist soil, and is not so large as the Lob worm, neither is the tail end so distinctly lobed or flattened; it is also of a much deeper colour. The Red worm is a still smaller worm, and a capital bait for almost any fish; its length is in general not greater than an inch and a half, it has a thin yet not tender skin, and is almost round in section. It is generally found in very old manure heaps, or mounds of decaying weeds, leaves, etc. The Brandling is a handsome worm, striped with yellow, and is especially good as a Perch-bait; it seems to

Digitized by Google

be a variety produced mainly by different food and surroundings. This worm is generally found in heaps of rich, damp manure, where a quantity of moist, ammoniacal, but not caustic, refuse has been added to the soil. While treating on Worms, we must not omit the Blood-worm (it is not a worm, however, but the larva of a kind of midge fly — *Chironomus plumosus*); the so-called Blood-worms are generally found in the mud of ponds (to which cows have access) in incredible numbers. For Gudgeon, the best baits are Blood-worms and small, bright Red worms; when baiting with Blood-worms put two on the hook; they require very careful handling when doing so, as they are apt to fall to pieces; in fact, they are a good bait, but rather troublesome, and sometimes unobtainable. There is another variety not yet mentioned, viz., the common Red worm of our rivers, *Tubifex rivulorum*, which is too small to use for bait, but is exceedingly useful as a fish food; these are found in the river mud, and in such great quantities that they often redden large patches of the soil; they multiply very rapidly, not only by eggs but by division.

For scouring worms and getting them into good order for baiting, a supply of clean, fresh, damp moss is necessary. They should be turned over and sorted occasionally, removing any dead worms, and placed in clean moss about every other day: by this means the angler will be able to keep a good supply always ready.

There are various other baits used in bottom-fishing, such as boiled wheat, different kinds of paste (made from bread, cheese, etc.), whilst a few anglers recommend scents of various sorts. One species of flavouring for worms is obtained by putting a sufficient quantity of Brandlings in a tightly-corked bottle, which, being placed in a manure heap, causes the worms to dissolve into an oily fluid; the scent of live Brandlings is sufficiently strong, but that of the oil will satisfy the most exacting advocates of scented baits. Do not, however, follow the example of an angler who wished to try it on his worms in a certain Trout stream. He manufactured the oil all right enough in a couple of small bottles, one of which he placed in his pocket, the other being in reserve in his portmanteau. Arriving at night

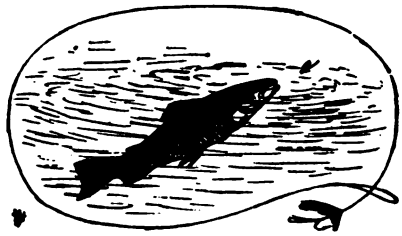
Digitized by Google

at his destination, he sat down in the coffee-room of the hotel to supper, forgetting the bottle in his pocket, on which he naturally sat, and in a few seconds was the centre of observation. After a hurried explanation of the cause of the fearful smell, he rushed off for a change of clothes, only to find that the reserve bottle had met with a similar fate in his portmanteau whilst in the luggage-van of the train. *Verb. sap.*

The various small fish, such as Minnows, Gudgeon, Dace, and Roach, are all used as live or dead bait, and will be mentioned in later chapters with the tackle necessary for them.

Artificial baits, whether in imitation of fish or in the form of spoons, etc., are at times very successful. Some of these will be found fully described and illustrated further on, but every season finds a new pattern more or less natural and useful. Artificial worms have been in use, more or less, for the last half-century, one French angler of our acquaintance who strongly objects to handling live worms being very successful with the artificial ones amongst the Perch.

Digitized by Google



CHAPTER III.

THE CLASSIFICATION OF FISHES.

Fishes form the Fourth Class (*Pisces*) of Vertebrate Animals, which class is divided into two Series—Bony and Cartilaginous. These are again sub-divided, the former into six and the latter into two Orders. With regard to fresh-water fish, with which we are more immediately concerned, they are comprised, with the exception of Lampreys, which belong to the second Series, in the following Orders and Families:—Order I.—1. The *Percidæ*, or Perch; 2. Those with hard cheeks, such as the Stickleback and Bullhead. Order II.—1. *Cyprinidæ*, or Carp; 2. *Esocidæ*, or Pike; 3. *Salmonidæ*, Salmon or Trout. Order III.—1. *Gadidæ*, or Cod, with which family is connected the Burbot; 2. *Pleuronectidæ*, flat fish, including Flounders. Order IV.—*Muræenidæ*, or Eels. The Lampreys belong to the Cartilaginous Series, Order II.—*Chondropterygii Branchiis fixis*, the first name being derived from the Greek *chondrós*, cartilage, and *pterygion*, fin; the Lampreys are included in the second family, *Cyclostomata*, or Sucking-fish.

There are four varieties of scales, the scientific names of which are derived from the Greek, which will also explain their shape —Cycloid, from *cyclos*, a circle; ctenoid, from *cteis*, *ctenos*, a rake; ganoid, from *ganos*, brilliant; and placoid, from *plax*, a level surface; the termination of each name being derived from

Digitized by Google

eidos, resemblance. As a general rule, the age of a fish may be approximately determined by the somewhat strongly marked layers on the scales, each layer representing a year's growth.

The names of the different fins have Latin derivations: the pectoral, or those behind the gills, from *pectus*, breast; those on the back, dorsal, from *dorsum*, back; the tail, caudal, from *cauda*, tail; the anal fin just behind the vent of the fish, from *anus*, the vent; those on the belly, ventral, from *venter*, the belly. Some fish, such as the Salmon, Trout, Grayling, Perch, etc., have two dorsal fins, whilst the Lamprey has no ventral fins.

The teeth of fishes of vary considerably in number, form and position: some are almost, if not quite, destitute of teeth; others, such as herbivorous fish, have teeth in the throat; those which prey on each other have them in various positions in the mouth and throat, some having them on all the bones of these.

Digitized by Google

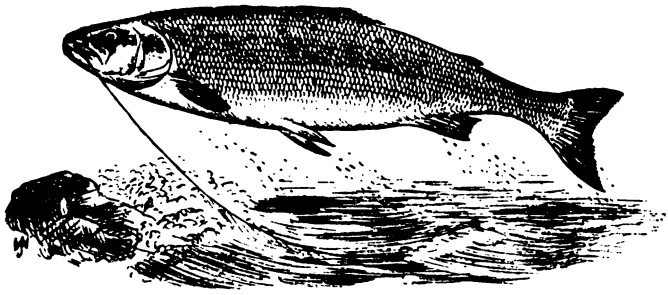


FIG. 27.—SALMON.

CHAPTER IV.

SALMON.

THE fish that stands highest in the estimation of the true angler is the Salmon (Fig. 27). His rapid yet graceful motions, muscular powers, and beautiful proportions, as much as the superior delicacy of his flavour as an edible, proclaim him the noblest of the denizens of the river; and his title to precedence has never yet been questioned. His scientific name is *Salmo salar;* French, *Saumon;* German, *Der Lachs, Der Salm;* Danish, *Lax;* Dutch, *De Zalm;* Norwegian, *Laexing.*

Salmon grow to a large size. In 1789, a fish of 70lb. was recorded as having been shown in London; in 1821, Mr. Grove, of Bond Street, had a fish of 83lb.; in 1870, a fine fish of 70lb. was caught in the Tay; and in 1880, one of 53lb. was taken in the Hampshire Avon. In 1885, a Salmon of the great weight of 80lb. was taken at the mouth of the Almond, a tributary of the Tay, by netters engaged in taking spawning fish for purposes of artificial hatching. This was said to have been a clean-run male fish, and was instantly returned to the river. Doubtless, the Thames Salmon were as large as any in the kingdom in the time of Walton, but then there were no pollutions

Digitized by Google

and drainage schemes to interfere with them; though if, as Walton says in reference to the Samlet or Skegger, which he "caught twenty or forty at a standing, that will bite as fast and as freely as Minnows, these be by some taken to be young Salmon," and if other anglers, or rather pot-hunters, did the same, no wonder that at last someone had the grand distinction of catching the *last* of the Thames Salmon.

Salmon spawn between November and the beginning of February, ascending the rivers for many miles for the purpose of reaching the spawning beds, and leaping or otherwise making their way over waterfalls and other obstacles to their progress. The "ladders" or stairs, now so generally adopted for their assistance, are built at the side of the fall, so that by their aid, the fish can be assisted up a waterfall of any height, over which, unhelped, it would be impossible to leap. It is a curious fact in the natural history of the Salmon, that they should nearly always return from the sea to the same river in which they were bred, and that they should, year after year, occupy the same breeding-grounds, locally called "redds." These are always formed in the sand and gravel in a somewhat shallow part of the river; running water, combined with a certain amount of solar and atmospheric influence, being necessary to vivify the impregnated ova.

The hooked bill of the old male Salmon is found to be more prominent about spawning time. "Ephemera" considered that it was used for assisting the female in burrowing the sand to form the spawning bed, whilst others believe that it is used as a weapon of attack.

As there are several male fish in attendance, they will fight furiously for the privilege of being the mate of the spawning fish. Whilst these battles are in progress, the female will burrow out a bed for the ova which she deposits in it, and it is then impregnated by the chosen male, or even by other smaller fish during his absence, the impregnated ova being covered in by the sand cast over them whilst the female is making a fresh burrow. This work may extend over a period of from two to ten days, according to the size of the fish and the quantity of ova to be deposited. The time of hatching occupies on an average about

Digitized by Google

120 days, depending very much on the temperature of the water, etc. Frank Buckland calculated that the number of ova was about 900 to every pound weight of the fish, but from the time of their deposit by the parent fish, their troubles begin. Larvæ of all sorts of insects work their way into the gravel and feed on them quietly; hungry fish will root them out and devour them; water-fowl of all sorts seek for them eagerly, so that only a small fraction hatch into fry. When these come out of the egg, they carry with them nourishment for the first few weeks of their life in a little bag called the umbilical sac. This disappears in about forty days from the day of hatching, and the little fish, which is called a Parr, Samlet, Tecon, and various other names in different localities, appears. It is of a light brown colour, having on its sides several transverse bars; at six months old it is about four inches in length, though this varies in different broods of fish. In about twelve months from hatching out, the majority of them lose their Parr-marks, and assume the silvery scales which they require for their first trip down to the sea as Smolts, when many of them have attained a length of eight inches. In about two months many of these return from the sea, weighing from two to four pounds; they are now called Grilse, or first year's Salmon. Professor Huxley believes that their food in the sea consists of the small fish found in large masses in the water. Dr. Knox considered that they lived on the ova of some of the *Echinodermata* as well as on many of the *Crustacea*. Sand-eels also have a great attraction for Salmon, and in the North they are used as bait.

When the adult fish have spawned, they drop down to the first pool, where they remain till they have recovered from their exhaustion. They are now termed "Kelts," and are unfit for food. The females are also mentioned in some of the Salmon Acts as "Baggits" and the males as "Kippers," though the latter term, as generally understood, is applied to Salmon, Herrings, Mackerel, and other fish, which have been cured by means of an application of salt and sugar, and afterwards dried. Salmon descended from large fish grow faster and larger than those from small fish, and often the only distinguishing marks between a Grilse and a Salmon will be the smaller and diamond-pointed scales of the

Digitized by Google

former, whilst its fins will be larger, and its tail more deeply forked than those of the Salmon.

The exertions made by Salmon to pass over water-falls are almost incredible. Pennell says that it has been calculated that a Salmon swimming at full speed, or it might be called "putting on a spurt," will glide through the water at the rate of about 1,500 feet in a minute, and it is from the enormous impetus thus acquired that it can make the extraordinary leaps that are necessary to pass falls on which Salmon-ladders are not constructed. The description by Drayton, of the Salmon taking its tail in its mouth, is only a specimen of poetic licence. I should very much doubt if he ever saw an instance of that which he describes. Many fish will spring out of the water when hooked; I have had it happen with Pike of over twenty pounds in weight, especially if hooked in the tongue. The depth of the pool below the fall will materially influence the height to which a Salmon will leap, and the leap, as will be noted, is not a perpendicular but a slanting jump, the result of a previous rush through the water; the rush ended without attaining the required height to pass the torrent of water, they fall back into the pool, or, as sometimes happens, kill themselves by striking on rocks. Mr. Mudie describes, in "The British Naturalist," how the Frazers of Lovat, lords of the manor of Beauly, used to have a kettle of water boiling on a flat rock by the side of the Kilmorae Falls, into which a Salmon would occasionally fall, through missing his spring, and thus be boiled alive, in the presence of an assembled company.

In some rivers there is to be found a very early-run class of Salmon, even as early as January, though usually they are caught in February and March, crossing those which are coming down the river as Kelts. Frank Buckland mentions an instance of a fisherman who caught at one haul of his net in the tideway, a Kelt, a female full of ova, and a fresh-run Salmon. The first was evidently going down in the ordinary course of events, the second was as evidently a very late spawner, and the third he considered was one of a spring migration, as distinguished from an autumn migration, and, ascending the river in February, would not deposit any ova till the following winter.

Digitized by Google

According to Frank Buckland, although instinct has a great deal to do in guiding Salmon back to their native river, their power of smell is also of great assistance. He says:—"Upon the front part of the snout of the Salmon will be seen, on each side, an opening divided into two by means of a diaphragm of skin, which runs across from side to side. . . . . If the valve at its entrance, formed by the skin, be removed with a knife or pair of scissors, it will be seen that the bottom of the opening consists of a flooring of a delicate red substance. If the fish's head be then placed in water, the red substance will be seen to consist of numerous folds lying side by side, and all diverging from a common centre. These folds float about free in the water, and receive the impressions of the smell of the water by means of the delicate nerve-fibres which are spread out upon them. The fish has, in fact, a nose made for smelling in the water, not a nose made for smelling in air. . . . . When the Salmon is coming in from the sea, he smells about till he scents the water of his own river. This guides him in the right direction."

If this is strictly true, then the old-fashioned ideas about the utility of scented baits would not be so absurd after all. But, is it true? The Salmon, after spawning, certainly drop down the river in a black, emaciated condition, to recuperate in the sea, after their arduous work on the spawning ground. But do they not remain in the depths of the ocean, within a certain radius of the termination of the river whence they started, fattening on the immense amount of food placed at their disposal? When there has been a drought of a month or more, quantities of Salmon are seen playing about at the mouth of each river. When the rain comes, and the flood-water brings down the peat or other colouring matter, then they appear to notice the change in the colour of the water, and take advantage of the flood to rush up towards the spawning grounds, resting at each pool which may take their fancy. These fresh-run fish may be known by the sea-lice adhering to various parts—usually about the head—but when they have been for about twenty-four hours in the fresh water, these will disappear, and the fish will often be seen jumping out of the water, the better to free themselves from the parasites. A fresh-run Salmon will travel a very long distance till he finds a pool to suit him, in which

Digitized by Google

to rest; then on another rush of water he travels onward to another pool, and so on till he arrives at his destination, or is captured *en route*. Shortly after arriving in fresh water he loses his bright silvery hue, and after being some time in the river, becomes of a red shade; I have seen them of a most peculiar mottled appearance from Hampshire.

When Salmon are pairing, it is not at all uncommon to find that if one of the pair has been hooked, and is being played, its mate will accompany it, and swim alongside for a long time before leaving it to its fate. But beyond these actual facts which can be seen and noted, a very great deal of that which remains is really theory: there can be little actually known of its

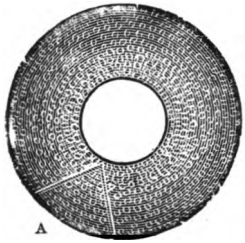


FIG. 28.

FIG. 29.

FIG. 30.

SECTION OF BUILT-CANE ROD.

life in the ocean, of its food there, or of its alleged extremely rapid growth.

The *fly-rod* for Salmon should be from fifteen to eighteen feet in length, or even more, according to the size of the river you intend to fish. It should be furnished with two long tops and one short one, the latter to use when Minnow-fishing, and the spare fly-top in case of a fracture. The material may be either greenheart for the upper joints with an ash butt, or whole East India cane, which is equally strong and considerably lighter; or, if the angler does not object to the extra expense, his rod may be of built cane, as it is termed by some, or split cane as it used to be called. The drawings (Fig. 28 to 30) show, for the benefit of the tyro, the sections of each piece of the rod, which is built up from six pieces of *solid cane*, very accurately fitted and cemented

Digitized by Google

together longitudinally. A, in Fig. 28, shows one of the six sections as it is cut out of the cane. In Fig. 29 the six pieces are seen as they should fit together. Fig. 30 shows the six pieces cemented together into one solid piece; and as the bark is not removed, it is evident that the result is a very powerful rod. After the joints have been well dried and polished, they receive a number of silk whippings, an inch or so apart, to strengthen them, and these, together with the whippings of the snake rings, prevent any parting of the cemented pieces. These rods are very powerful and durable. Specimens made of three sections of cane instead of six were shown by three London firms at the 1851 Exhibition.

The line should be from sixty to a hundred yards long, of a size proportioned to the rod in use and the average length of cast necessary to be made in the river to be fished. A prepared plaited silk line, tapered at the point and tolerably stout upwards, so as to give more precision to the cast, is the best. At the end of this, after the winch has been fixed to the rod and the line drawn through the rings, is attached a casting line, either of plaited gut, twisted gut, or strong single gut, and usually three yards in length.

The winch has already been described; but whichever pattern is selected, be careful to have one large enough and of the best workmanship: otherwise, at a critical moment, the line may jam, or the check go wrong, and away goes the "fish of the season."

Now, with regard to flies, these vary exceedingly, not only in different rivers, but in different parts of the same river. It is a good plan to keep a diary of the flies with which you kill, giving the date, the state and height of the water, and conditions of the weather, with other notes which may suggest themselves; it will be found to be a most valuable guide in after years. If in the company of Salmon-anglers, listen and learn, but do not become prejudiced. The same fly will appear differently to the fish on different days, under different conditions and depths of water, with different conditions of cloud and sky. If fishing on a falling water after a flood, decrease the size of the fly as the water clears. The size and colour of the fly depend greatly on the volume and colour of the water, as well as on the state of the weather and the

Digitized by Google

season of the year. In some rivers there are a few standard flies which appear to be almost the sole patterns used, but for a selection with which to start work, the following patterns will be found almost universal killers: Jock Scot, Black, Blue, and Silver Doctors, the Rangers, Graham, Parson, the Eagles, Popham, Miller, Wilkinson, Colonel, and Butcher. In Ireland it is the practice to use them large and gaudy; whilst in Scotland dull flies with, in general, a speckled wing, and a claret or orange body ribbed with gold twist, are more killing; in English rivers rather a smaller fly is used than in Scotland, but in a greater variety of colours. There are scarcely any rules of an universal character to be laid down; experience must be the sole guide in the matter. If a description were to be given of all the killing flies, as their name is legion, they would require a greater amount of space than my present limits will permit.

It has been a matter for discussion as to what the Salmon considers the fly to represent, whether a crustacean, an insect, or a small fish. It is of course obvious that it does not represent any known fly which may hover over the edge of the stream, with the exception, perhaps, of a dragon fly. Its movements under water point rather to an imitation of some of the many-coloured little fish with which the Salmon has been acquainted during its sojourn in the sea, and it will not require much elasticity of imagination to suppose that the Salmon would not be indisposed to renew his acquaintance with a stray member of one of those hordes of small fry on which he has so rapidly fattened in the depths of the ocean, although he has never been caught with any food in the stomach.

There are three principal points to be learnt in fly-fishing for Salmon: 1st, to throw the fly properly; 2nd, to work it when in the water; and finally, to hook and play the Salmon till it is within reach of the gaff. The best Salmon-fisher is not he who throws the longest line, but the one who throws it adroitly to a proper distance and makes the best of his fly when in the water.

The following is the most natural manner of throwing the Salmon fly: With the right hand grasp the rod well above the winch, the left being below it, and the right foot advanced. Bring

Digitized by Google

your rod and line freely in an easy semi-circular sweep over the right shoulder, until the right arm is extended in a vertical direction over the right side of the head; then, giving a strong action to the right arm, send the rod and line strongly forward; and when this combined action is performed without nervousness, but dashingly, and in an energetic manner, the fly will be forced forward to its destination. Begin with about twenty yards, and when you can throw that well, increase the distance by degrees. This cast is intended for fishing down the left side of the river, with the right side of the angler nearest the water. For fishing down the right side of the river, reverse the above directions: Grasp the rod with the left hand above the winch, the right hand below, the left foot to the front, and the left side next the water. Making use chiefly of the left arm, sweep the rod over the left shoulder till you feel the line extended in the air behind, and then propel it forward as if you were going to strike with the rod at something hovering over the river, in the direction in which you wish to send the fly. Checking the forward motion of the rod, the line will be sent straight out, the fly and gut-line dropping first on the water. Do not bend over too much with the descending rod, as that brings the point of it too close on the water, deadening its elastic and propelling action, and causing the line to fall in a slovenly manner on the stream.

After having learnt this cast properly, there are other well-known casts to be acquired which are at times most useful, notably those known as the "Spey Cast" and the "Spey Switch." These, however, are casts which can be better learnt at the river-side than from a book. The chief thing is to present the fly in a proper manner to the fish—this is of the utmost importance—and the last foot at least of the gut should be actually straight, holding the fly firmly so that it cannot wobble. Keep a sharp eye for frayed gut, and always examine the point and barb of the hook before commencing to fish a pool, but take especial care to do so after hitting anything behind you when making a long cast. Some heavy fish will take the fly under water very quietly, whilst others come with a rush, making a great swirl in the water. If you should raise a fish and miss him, rest

Digitized by Google

him for a few minutes, and then try him with a size smaller fly. In fishing a pool, always begin as high up in the neck of it as possible; throw across and down stream, keeping the point of the rod rather low, and remember that the fish does not take the fly when it is descending. Do not work it too rapidly.

The Salmon-fly, unlike those used for Trout, is never worked with or down the stream, but against it; it then seems like some splendid large insect, swimming up stream beneath the surface, by fits and starts; whereas if worked down stream it would roll over in an unnatural manner, on account of the heaviness of its wings.

Salmon will rarely be seen resting where the bottom is smooth, but incline more towards rocks and large stones. Should a rapid current run between them, work the fly on each side of it, between the still water and the rapid. In a deep pool they will lie in almost any part, but especially in the point of meeting of two currents formed by rocks standing apart but opposite each other. Throw the fly below, and work it up the middle between them; afterwards on the inner side of each.

Never strike too sharply at a Salmon; it is best to strike gently a little sideways. This is quite sufficient, and he will hook himself fast enough on turning to move off. Use him gently, and coax him, as it were, from any sheltering boulders into open water, where he can have a clear field and no favour. Put the strain on him whenever you can, and select the clearest spot on the bank for landing him; if he is a large fish in full vigour, he may perhaps tow you a long way up or down the water before you are able to exhaust him sufficiently to bring him to the gaff. At first, when he feels the hook, he may sink at once to the bottom of the pool, or perhaps make one or two frantic rushes before doing so; then he will sulk, and the inexperienced tyro will begin to think he has fouled a rock. Most Salmon-fishermen are prepared for this event, with a small disc of lead with a hole in the centre and a cut through to the edge: through this the reel-line is passed and the disc then sinks in the water, giving a tap to the nose of the Salmon which generally has the desired effect of making him move. Never get flustered, and never be in too great a hurry to gaff your fish. If he is well hooked, you have

Digitized by Google

more time than he has; and if he is lightly hooked you can never bring him to the gaff by being too rough with him, or too hasty. You may draw a fifty pounder to the side with a rod that will not lift five pounds.

Then, again, do not be disheartened after fishing a pool once down unsuccessfully. Change your fly, try one of a different shade or even a different-sized one; but remember that you cannot kill a fish unless your fly is in the water, and if by chance you should hook a fish foul, look out for all sorts of vagaries. Above all, use good tackle; if you can afford the luxury of Salmon-fishing, it is false economy to use doubtful gut, cheap flies, or so-called "cheap tackle" of any ind.

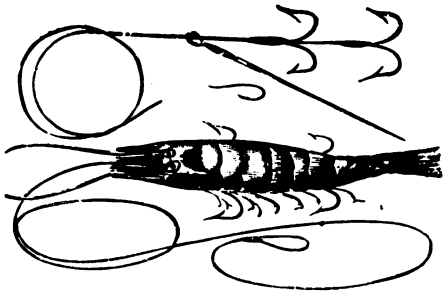


FIG. 31.—PRAWN TACKLE.

Salmon are also taken with the *spinning-bait*, a description of the method of using which will be given in the next Chapter. Brown and Blue Phantoms, spoon-baits, made long and narrow, *Bell's Life* spinners, etc., are all, at times, very killing. When the worm is used, a couple of large lobs should be threaded on the hook so as to leave the tails hanging down, and a lead equal to the strength of the stream should be on the trace. The prawn is a very deadly bait when the water is clear and rather low; the tackle consists of two double or treble hooks, whipped on a length of stout gut, on which a darning-needle is suspended by a loop at the eye-end. This is run through the prawn longitudinally to strengthen it, beginning, however, at the tail-end and *not* at the

Digitized by Google

head, as drawn (Fig. 31). The point of the needle being then inserted in a very small gut loop projecting from the side of the end triangle, makes the bait secure to the tackle, the hooks being underneath the prawn and concealed by the feelers and legs. It is fished head downwards, somewhat slowly, by sinking and drawing, using sufficient weight on the trace for the strength of the stream. This is a very killing bait in the autumn.

Digitized by Google

Digitized by Google

TROUT FISHING ON THE ITCHEN.

(Casting over a rising fish, keeping well under cover).

Digitized by Google

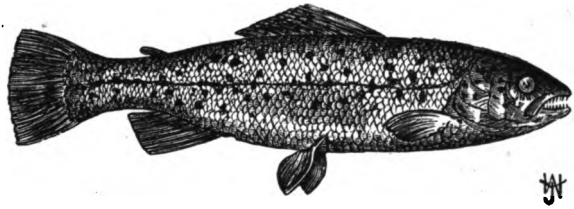


FIG. 32.—THAMES TROUT.

CHAPTER V.

TROUT, CHARR, ETC.

IN addition to our common River TROUT (*Salmo fario*)—Anglo-Saxon, *Truht;* Middle English, *Troute* and *Trowte* (1440); French, *Truite;* German, *die Forelle*—there are many other kinds, such as the Sea or Salmon Trout (*Salmo trutta*), a migratory fish especially abundant in the Scotch rivers; the Loch Leven Trout (*Salmo levenensis*), now very celebrated from the angler's point of view; the Great Lake Trout (*Salmo ferox*), occurring chiefly in the North of Scotland and Ireland; and many others. In the Loch Leven Trout, the head is small in proportion to the body, and the body is much less stout than in the River Trout; no beak or mandibular hook occurs. The sides of the body show cross-shaped brown spots (Günther). The Great Lake Trout differs much from most other species, not only in its capacity for growth, but in its form and habits, though it bears some slight resemblance to the Lake of Geneva Trout, with which Pennant seems to have confounded it. The body of *S. ferox* is stout and short. In the adult, the head is relatively large; there is a mandibular hook in spawning season. The sides of the body and head exhibit many round, deep black spots (Günther). The young fish will sometimes take an artificial fly: the adult is said never to do so. It is usually captured by spinning with a natural or an artificial bait. The Bull Trout, commonly known as *Salmo eriox*, is an anadromous or migratory

Digitized by Google

salmonoid. It a *Salmo trutta*, or Sea Trout, modified by food, water, habits, etc. The Sea Trout is differently named in different localities, *e.g.*, Sewin, in Wales; Peal, in Ireland; White Trout, in Scotland, and so on.

According to Günther, there are five varieties of CHARR in Great Britain—that in Windermere (*Salmo willughbii*), where the Charr are found in deep water, running up the River Brathay to spawn, the time for which varies from October to February; the Welsh Charr (*Salmo cambricus*), said by Buckland to be simply a variety of the Sea Trout common to the rivers of Wales, Devonshire, and Cornwall; the Gray Charr (*Salmo grayii*) of Lough Melvin, Ireland, and another Irish variety (*Salmo colii*), found in Loughs Esk and Dan; and the Northern Charr (*Salmo alpinus*), in Lake Helier, the Orkney and other Scottish waters. In addition to these are the Continental varieties, that of the Lake of Geneva being known as *l'Ombre chevalier*. The Charr seldom exceeds twelve inches in length, though Buckland records a specimen of the Windermere Charr which weighed 2lb. The colour varies considerably, the same as in other species, but the belly is usually of a brilliant red, which increases in vividness towards the spawning season; the sides are dotted with red, and the pectoral, ventral, and anal fins are edged with white. Charr are lake fish, never migrating to the sea; they inhabit the deepest parts of the lake, and appear in the shallower water only at spawning time; they are therefore seldom taken with a fly, except at that particular season, the great depth of the water at which they live during the major part of the year being inaccessible except with a spinning Minnow on a heavily weighted trace.

The GWYNIAD (*Coregonus Pennanti*) is a member of the family of *Salmonidæ*, but in general appearance is somewhat like a Herring, except that it possesses the adipose fin. There are several varieties of the *Coregonus*—the Powan of Loch Lomond, the Pollan of the Irish lakes, the Vendace of Dumfriesshire, the Gwyniad of Wales, and the Schelly of Cumberland. The Gwyniad attains a length of about 12in., and spawns towards the end of the year.

The TROUT is next in importance to the Salmon in the piscatory

Digitized by Google

world. In the Derbyshire rivers, such as the Wye, Dove, and Derwent, the average weight of the Trout is about 1lb., whilst in Southern streams, such as the Itchen and Test, the average weight is about 2lb. Nearer London we have the Wandle and the Darenth, where the Trout are most game and sporting, averaging about 1lb. In the May-fly season, on all these rivers except the Wandle, the fish killed are of a higher average weight, the Trout apparently going mad over this *bonne-bouche*. The colour, shape, and quality of this fish vary according to the water it inhabits. An intelligent and sagacious individual, he carefully avoids thick or dirty waters, and revels in the clear mountain stream, calling forth the utmost ingenuity and skill of the angler ere he becomes a captive. When in full season, observe his fascinating and prepossessing figure, sparkling in all the gorgeous colours of the rainbow, and shaped in strict accordance with the most refined rules of symmetrical proportion (Fig. 32). Look at the reverse of the picture, and see him out of condition: the contrast is wonderful. A thin, black, wretched-looking creature, with a head apparently too large for his body—who that has not seen him in both conditions would believe that this was the nice and fastidious exquisite which charmed our senses with his every movement?

The colour of Trout varies very much according to the depth or brightness of the stream. I have known fish in shallow bright water which have been extremely silvery and light in colour, whilst in other parts of the same river which were overhung with bushes and trees, the Trout have been altogether as dark. It is well known that Trout (that is, those of any size), will establish themselves in particular places, looking upon these, so to speak, as their homes, where they may be regularly found; and on one occasion a large fish, which constantly returned, after foraging for food, to its home under a shady bank, was found, through always resting there in the same position, to be quite dark on the side next the bank and equally light on the exposed side, giving it a very curious appearance.

With regard to the sizes of Trout, I may mention the following amongst the noted fish whose weights have been authenticated. May 11th, 1863, a grand Trout of 15lb. was taken in

Digitized by Google

Marlow Weir; another handsome fish, weighing 16lb., was landed at Chertsey; but this was eclipsed by the Reading Trout caught in 1880, which scaled 16lb. 15oz. In 1868, a spawning Trout weighing 14lb. was taken from the Alresford Pond, which is connected with the Itchen; and in 1877, a fine fish of 13lb. was taken in the Avon. The largest English Trout on record is believed to be that from Drayton Park, which weighed 22½lb., and the skeleton of which was presented to the College of Surgeons. These belong to the *Salmo fario*. The Lake Trout (*Salmo ferox*) attain a very much larger size; in 1866, a fine specimen weighing 39½lb. was caught with a Salmon-fly in the river Awe. The largest Trout ever known to have been taken in the Westmeath Lakes, Ireland, weighed 26lb. 2oz., and was caught with a small spoon-bait. In some of the foreign lakes, where there is a great depth of water, the latter species grows to an almost fabulous weight; in St. Wolfgangsee, Austria, one was caught in 1877 which scaled 33 kilos, or nearly 73lb.—this measured 4ft. in length by 20in. in thickness—but in 1862, a fish was landed which was about 4lb. heavier. In 1880, a Lake Trout weighing 44½ kilos, or about 98lb., was successfully landed in Lake Constance.

Trout spawn about October or November. The fishing season in the Thames commences on April 1st, and in most other rivers not till May 1st. They are influenced very much in their recovery from spawning by the state of the weather; as an instance, in 1854, I caught a Thames Trout (Fig. 32) weighing nearly 13lb., early in April; in the following year, but one day later in the month, I took one weighing 7½lb.—and the difference in appearance was extraordinary. The first year, the weather had been very warm, and the fish in April were in first-rate condition: the second year had been altogether as cold, and the fish were proportionately thin and black.

All Trout have their haunt or place of retreat—generally some large stone, or root of a tree—each fish appearing to have its regular portion of water, and seldom trespassing on that belonging to its neighbour. If one of these sections of the stream becomes vacant, a new occupant soon takes possession, and it is simply by being aware of the position of these

Digitized by Google

haunts that an angler knowing a river possesses such a decided advantage over one who does not, however skilful he may be in other respects. In the spring, Trout are found in rough streams and shallows: they seek deeper water in the summer. They also delight in whirlpools and holes beneath a rapid fall, under bridges, rocks, and below weirs. Those that frequent overhanging banks and bushes, or lie hidden under cover of trees during sunshine, are much darker and yellower than those that love the unshaded stream with a clear, sandy bottom; these latter are altogether silvery and bright, though belonging to the same species. In the clear Hampshire streams the Trout when feeding appear to be everywhere. Patches of weeds afford them ample cover from the sun, as well as abundance of insect food until a rise of fly brings them to the surface.

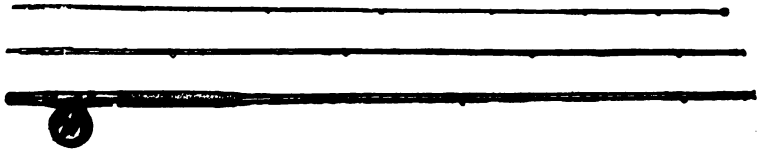


FIG. 33.—FLY-ROD FOR TROUT.

Trout are taken with the fly, by spinning a minnow or other small fish, and with the worm, gentle, etc.

For Trout *fly-fishing* the most useful rod is between 10ft. and 11ft. long, in three pieces (Fig. 33), and with an extra top. A single-handed Trout rod should balance about a foot up the butt, by having the winch or reel close to the socket; the leverage being greater, a better balance is obtained. Do not have a rod too whippy; for a novice it is better rather stiff than otherwise. It may be made either of greenheart, with the butt of ash, or of whole cane with greenheart or cane tops. These whole-cane rods with ordinary care are as durable, and can be made as powerful, as the built-cane rods. For small rivers a rod of 9ft. to 10ft. is most useful; but in every case have snake rings, so that there is no fear of a check on the line, which frequently occurs when the old-fashioned small loose rings are used. If a

Digitized by Google

built-cane rod is preferred, see that there are plenty of whippings on it, as these strengthen the rod considerably, and obviate any chance of the cement which fastens the strips of cane together, giving way under excessive sun-heat, or dampness from heavy rain. A little dry soap on the shoulder ferrules will prevent them from jamming in the long ferrules; but should this happen, warming the long ferrule in a flame and then carefully twisting the two pieces in different ways, but holding them close to the ferrule, will often overcome the difficulty.

The winch may be either of bronze with a rotary action, or of bronzed aluminium. The latter are extremely light and for a 9ft. 6in. rod nothing could be better; but of course the tyro will understand that in selecting this, he must be guided a great deal by what is necessary to balance the rod he may choose, and again, by the length and size of the line requisite for the stream he is going to fish.

The material of the winch-line may be either plaited silk and hair (though at the present time these are little used) or prepared plaited silk. The length should be from 30 to 40 yards, and the line should taper at both ends, in order that when the fine taper point is worn from the end that has been in constant use, the line can be turned end for end on the winch, and the unused end brought into requisition. Select a line fairly stout in the middle, as the weight of it will ensure that accurate lengthy cast necessary for a rising up-to-date Trout; the fine point, to which is attached a three-yard gut cast, also tapered, will, with practice, allow a fly to be dropped lightly to a rising fish without the stout part of the line being perceived.

Instead of the ordinary way of waterproofing lines by soaking them in the preparation, the tapered silk line is immersed in a bath of pure boiled oil, which is then placed under the receiver of an air-pump to exhaust the whole of the air. When all the bubbles have dispersed, the line is taken out from the oil and drawn lightly through a piece of flannel; it is then carefully wound on a long frame, which is baked in an oven for ten hours at a heat of about 150degs. Fahr. When cold, the line is taken off the frame, and any irregularity on the surface is carefully removed, when it again undergoes the oiling process under the air-pump,

Digitized by Google

followed by another baking for ten hours. This operation is carried out from six to ten times, and the line may be either left after the last coat with its bright appearance, or dulled by an application of red-deer fat, which can be renewed whenever necessary during the life of the line. It may very easily be imagined that lines which have to undergo these processes can never be made cheaply in the first instance; but inasmuch as they are as nearly perfect as possible, they must be the cheapest in the end to those who can afford to pay the initial cost.

With regard to flies, in the spring I should use the Light and Dark Dun, Olive Dun, Hare's Ear, Partridge Hackle, Red Spinner, Hofland, Wellington, March Brown, Soldier Palmer, Coch-y-bonddhu, Emperor, and Stone Fly. Summer: Oak, Cowdung, Sand, Grannam, Alder, the various Palmers, Whirling Dun, Wickham Fancy, Artful Dodger, Carshalton Cocktail, Wrantail, Grouse, Yellow Sally, Coachman, and Green and Grey Drakes. Autumn: Ant, Pale Dun, August Dun, Cinnamon, Governor, and the Palmers. Be guided in the size of fly, of course, by the river you are visiting. In the Thames, for example, you will require a very large size for Trout—a small Salmon-fly, such as Jock Scot, Silver Doctor, or Dusty Miller. In the Wandle, however, none but the very smallest Cocktails will tempt the appetite of the spotted beauties of the stream, upon which the May-fly is never seen, and where the Trout will rarely be induced to rise at a Palmer, but will rush at a minute Quill Gnat or Yellow Dun. Illustrations of the following flies for Trout, etc., are given in Fig. 34: Greentail, Black Gnat, Bluebottle, Spinner Black, Red Ant, Holland's Fancy, Sand Fly, Olive Dun, Blue Upright, Cowdung, Sedge Fly, Yellow Dun, Olive Upright, Orange Dun, Black Ant, Alder, Wickham's Fancy, and Silver Blue Dun.

There are those who pin their faith to some three or four patterns for all the season, and although their nondescripts may occasionally kill, when an artist is using the rod, and presents the curiosity so neatly to a specially inquisitive fish that he takes it simply because it *is* a curiosity and like nothing he has ever seen before, still it may be adopted as a general rule that the nearer you approach a copy of the fly on the water the greater your

Digitized by Google

chance of success. The weather has a marvellous influence on the rise of the various flies, retarding in some cases and bringing forward in others, and in some rivers it appears to be almost as necessary to look to the cultivation and rearing of the flies as to

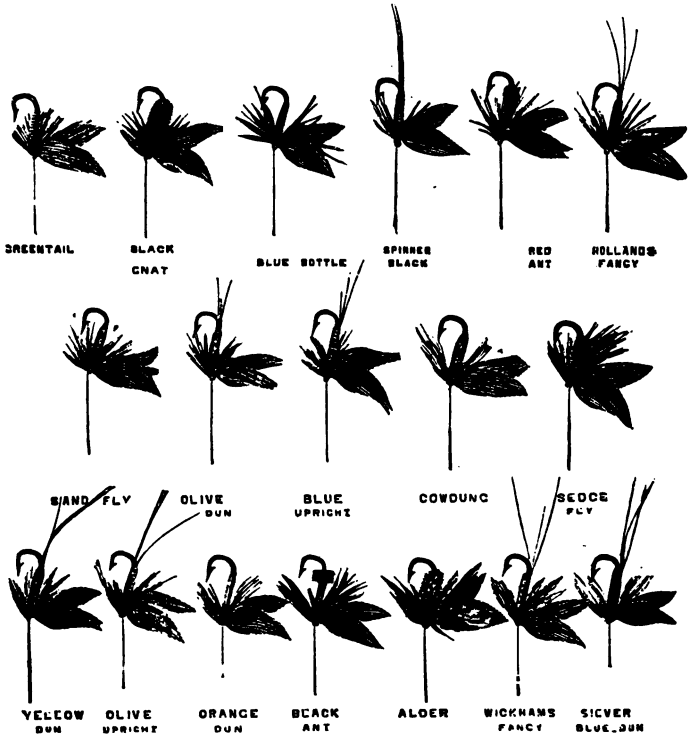


FIG. 34.—FLIES FOR TROUT, ETC.

the breeding and rearing of the fish. Then, again, your fly will have quite a different appearance in the water to the keen eye of the fish, when it has a dull background of a cloudy sky, as against the brightness of a clear day.

In addition to the variations of colour caused by these natural

Digitized by Google

surroundings, there are the actual variations in the appearance of the same fly at different times of the day and in different stages of its existence; all these must be duly noted by the tyro, if he wishes to become a successful angler.

One indispensable qualification of a Trout fly-fisher is, to be able to throw a fly well to any spot he may wish. This is an art that can only be learnt by practice; in fact, whilst you are learning, and the fish are in season, there should be *nulla dies sine lineâ*. Remember, in fly-fishing, as in spinning, one or two practical lessons at the waterside are worth all the teaching that can be written. Put together the rod, so that all the rings are standing in a straight line. On the reverse sides of the different ferrules are fixed what are termed "hitchers"; these are for the purpose of tying together the joints, to prevent their becoming loose in throwing. Fix the winch to the butt, and draw the line through all the rings till you have four or five y rds hanging uncoiled from the end ring of the top. Hold the rod in the right hand, a little above the winch, the thumb pointing straight along the rod on the upper side of the butt, which must be encircled by the remaining fingers. Now hold the rod almost perpendicularly, but pointing somewhat to the left, with the tip of the line between the thumb and forefinger of the left hand. Use no flies or gut casting-line till you can throw the plain running-line with a tolerable degree of certainty. Poising the rod freely and easily, move your right wrist and forearm round to the right; let go the tip of the line, held in the left hand, when it begins to feel taut, at the same time describing a sort of oval in the air with the point of the rod, by bringing it from left to right over the right shoulder, and casting forward by a motion of the wrist and forearm. When you have propelled the line forward, the action of casting should be gradually checked directly the line is straightening out to the front. If held properly, that portion of the butt between your hand and the spike will touch the under part of the forearm at the same time that the line is coming in contact with the water; this will prevent the point of the rod from falling too low, and thus causing too much line to fall on the surface. By slightly raising the point of the rod just as the flies are about alighting on the water, their downward

Digitized by Google

motion is checked, and they drop much more softly. Begin with about five yards of slack line, increasing a yard or two at a time, till you can manage ten with tolerable ease, when you may add the casting-line. Practise till you can ensure the gut falling on the surface of the stream ere any of the reel-line touches it. There are various other methods of throwing the fly, but when you have become perfect in this, which I consider the easiest style, you can soon vary the different movements, according as circumstances may arise, such as a variation in the direction of the wind, or obstructions on the bank or in the river.

Having practised the above overhead cast, the horizontal cast will be found useful for "dry-fly," the principal difference being that instead of the rod being almost upright, it is held almost horizontally whilst making the cast, and the line, which should be fairly stout near the rod, is "cut" smartly just above the surface of the water; as a rule the fly "cocks" better on the water, and is not so much affected if there is a heavy wind blowing, but the ground behind should be fairly clear, or the fly may catch in the grass.

Commence with one fly at the end of the gut-line; this is termed the "stretcher." When you can work this in a satisfactory manner, add a second, called a "dropper," fastened about two feet up the line at one of the joinings; and afterwards another "dropper," about two feet higher again. The joinings of the gut-cast being formed of two slip-knots, the end of the gut to which the dropper is tied is knotted and pushed through; the slip-knots being drawn tight, all is secure. Of course, it is understood that I am now speaking of the ordinary "wet-fly." The modern and perhaps more scientific method is with the "dry-fly" and as this is presented *up-stream* to a rising fish, one only is used and every care must be taken to cause it to drop lightly above him; then let it float naturally down, and be most careful to prevent the line from dragging, or your fish will be "put down," as it is termed. This may usually be avoided by giving an extra yard of line whilst delivering the cast, but it is a knack that must be learnt and cultivated in order to achieve it properly.

If you are using a cast of three flies, keep as far from the edge

Digitized by Google

of the water as convenient. Deliver your cast so that the flies fall first upon the water, and as little as possible of the line with them, this being the most taking moment of the whole cast, and about the only one in which Trout can mistake the artificial for the live fly; float your flies down, working them round towards the bank. Repeat your cast a step higher up, and so on. Strike gently from the wrist the moment you see or feel a "rise," with a very quick, yet gentle motion, by which the hand is displaced about two inches only. This, when done at the moment the fish has closed his mouth on the fly, is certain to secure a hold for the hook in some portion of the mouth. There may be only a stoppage of the line, but by the instantaneous movement of the angler's wrist, the Trout is fast. Having hooked your fish, he probably endeavours at first to shake out the hook by splashing on the surface; pointing your rod slightly to him will cause him to quit it. The moment he sinks, keep him well in hand, according to his size, raising the point of the rod well; as he rushes away, hold him gently, and when possible show him the butt, by inclining the rod backwards over the shoulder. Do not strain on him too much, but after checking him a few times, and when you find his struggles become weaker, wind up, and, guiding him to the easiest landing-place, bring him within reach of the landing-net. Be careful not to use this roughly, so as to frighten the Trout at the last moment, when you might possibly be unprepared for a violent plunge; but sink the net, and bringing him quietly over it, lift it up without jerking and secure your prize.

In the preceding paragraph I have been taking it for granted that the angler is using the ordinary cast with three flies, *i.e.*, a stretcher and two droppers. But in streams which are formed by the springs filtering up through chalk or limestone beds, and in which the water is remarkably clear, even after heavy rains, and not too rapid, which are also in the summer covered with weed beds stocked with larvæ of various insects and flies, a different procedure is necessary. These latter streams should be fished with what is termed a "floating" fly, because the fish, being accustomed to see the natural fly floating down on the surface of the clear water, will take it readily; but, of course, to be most successful, the angler should watch for a rising fish,

Digitized by Google

and present to its notice the best imitation he can of the fly at which it has been rising. For "floating" flies, those on the eyed hooks are much the best; the method of attaching them to the gut will be readily understood from No. 11, Fig. 24. Their chief advantage is that as soon as the gut to which they are attached becomes worn, a fresh piece of gut can be employed; whereas, as soon as the gut next the head of an ordinary fly is chafed, the fly is useless. As before observed, the floating or "dry" fly is used up-stream and its floating powers can be considerably enhanced by a very slight touch of odourless paraffin: an occasional false cast or two are useful to dry the fly. It may sometimes happen that the fish are rising at a very tiny black midge, smaller even than a 000 fly; at others I have seen them with their heads buried downwards in the weeds grubbing for larvæ and with their tails entirely out of the water. At this latter time, the only chance is with the "wet" or sunk fly. As a general rule, the latter is used down-stream, as the fish possibly takes it for the immature *ephemera*, whilst the floating fly cast up-stream appears to him to be the perfectly developed fly. If your rising fish is in a position requiring an extra long cast, this may be accomplished thus: Draw off an additional yard or two of line after ascertaining the distance, and holding the rod in the right hand, with the loose extra line in the left hand make the cast; and just before you check the rod at the end of the forward movement, let go the extra line, which will then shoot out through the rings, but must be drawn in again before making a second cast.

In some streams, *dibbing* for Trout with the *natural fly* is very much practised. When the May-fly is on the water, this method is extremely killing. Use the ordinary fly-rod, with a very fine gut casting-line attached to the winch-line, and a No. 8 or No. 9 hook. Catching one of the flies at which you observe the Trout rising, place it carefully on the hook. Standing as far back as possible, allow the wind to carry it on to the water; if a fish does not rise, lift and drop it again. Strike directly it is taken. Being very tender, it must be used very carefully, as the least jerk in casting will break it. If one fly is not sufficient, use a couple; they will be found more

Digitized by Google

killing near the bank than in the centre of the stream. There are several patterns of artificial May-flies, or "Drakes," some having cork bodies so as to give more floating power, others with larvæ bodies; straw and chenille also make good bodies.

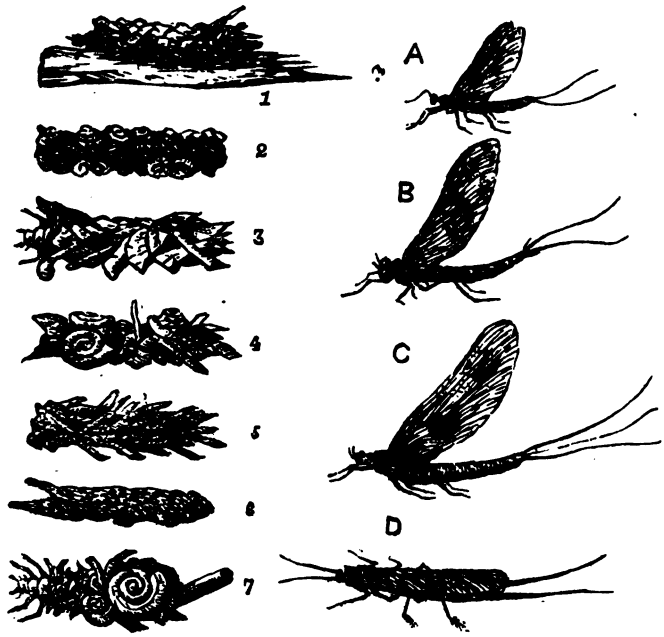


FIG. 35.—CADDIS-CASES AND FLIES.

A. Typical form of a *Diptera*, or two-winged fly.
B. The Great March Brown (*Baetis longicauda*).
C. The Green Drake (*Ephemera vulgata*).
D. The Stone-fly (*Perla bicordata*).
1, 3, 7, Caddis-cases, showing the head of Caddis at the entrance.
2, 4, 5, 6, Caddis-cases of various materials and forms.

The Alder-fly used under water is at times very killing when the May-fly is on.

Of the *Ephemeridæ*, or May-flies (Fig. 35 c), some two hundred species have been described. "From the earliest times," says McLauchlan (*Encl. Britt.*), "attention has been drawn to the

Digitized by Google

enormous abundance of species of the family in certain localities. Scopoli, writing more than a century ago, speaks of them as so abundant in one place in Carniola, that in his time twenty cart-loads were carried away for manure." I may add, however, that the original text of the author cited describes the vehicle conveying the insects by the word "*currus*," which may or may not mean "cart." Their great abundance is, however, incontestable.

The Stone-fly, Fig. 35 D (*Perla bicordata*), appears about the end of April, lasting till about the end of May, when the little Yellow May shows itself, proceeding from a water chrysalis, and remaining for about three days in its yellow state, when it alters to a light red or amber spinner, and ends its season with the appearance of the Green Drake (Fig. 35 C). This, however, does not come from the Caddis, but from the eggs deposited by the female Grey Drake, which in due time hatch into very active larvæ; these live under stones or weeds, and when ready for the change, float to the surface, splitting off their cases and appearing on the water as the Green Drake. The lighter Greens become Grey, and the darker ones the Black Drakes.

In using the artificial Mays, some of which are as unlike the real fly as it is possible to be, a great deal will depend upon the stream to be fished, and even on the particular part of the stream selected; it will also be found that while the May-fly is very plentiful in one part, it is almost entirely absent from another. Here, again, it may be noted that on every river there is a sort of local prejudice as to the particular fly which *ought* to kill. In all probability you are already provided with the pattern, but in any case, if there is a successful local angler, try and find out what *he* considers best: even then you are not obliged to follow his advice. One of the most generally successful patterns of May-fly is the "Murray" May; it is a hackle fly, and when mounted on the gut, the hackles are pulled back the reverse way; if then carefully cast, it falls lightly above a rising fish with the hook under water and is usually irresistible. When the May-fly is over, the Gold, Silver, and Cinnamon Sedges, Alders and Governers are generally the best killers.

The Caddis or Caddice Worm, otherwise the Cad-bait, Cadew,

Digitized by Google

TROUT FROM THE LOWER KENNET.

(The three fish scaled respectively 4*lb.* 2*oz.*, 2*lb.* 11*oz.*, *and* 1*lb.* 11*oz.).*

Digitized by Google

Digitized by Google

Cade Worm or Caddy, is the larval stage of the Caddis Fly (*Phryganea grandis*). The larvæ are produced in the water from eggs which the parent insect has carefully immersed at some depth; on their first appearance they have only the head and fore part protected by a horny casing, the rest of the body being soft and white, hence the necessity for the curious tubular house which the Caddis Worm proceeds to build—out of any small substances within reach—stones, pieces of grass, and shells being usually employed. Towards the end of its larval existence it closes up the entrance to its dwelling with a little net-like shutter, and shortly afterwards attains the perfect insect form, biting its way through the net with its strong mandibles.

The names of this curious insect are — according to the Bicentenary Edition of Walton's "Compleat Angler"—derived from old English terms — *cade*, a barrel; *caddy*, a case, chest, or box. Experiments have been made by taking the caddis carefully out of its dwelling, and placing it in a suitable receptacle in water, when it has immediately commenced the formation of a new house from materials which have been supplied to it, such as tiny fragments of glass, coral, pearl, etc., which it has combined with very beautiful results. It is a capital bait for Trout, and is used on a small single hook, with fine tackle.

Spinning for Trout is much practised in the Thames, and occasionally with great success, especially at the commencement of the season; early in the morning and towards sunset are generally the best times. In my "Complete Guide to Spinning and Trolling" will be found the following remarks, extremely characteristic of the Thames Trout:—

"When dropping down the stream quietly in a punt, on a fine summer's evening, while the setting sun tinges the distant water with gold, the Trout may be observed feeding on the shallows, and driving the Minnows and other small fish in shoals towards the shore, being as voracious in that respect as their mortal enemy the Pike; their mouth is admirably adapted for that purpose. The jaws and tongue being studded with small teeth, they are thus enabled to destroy multitudes of small Bleak, Minnows, and Gudgeons."

"Next to the lordly Salmon, to which, to my mind, it is

Digitized by Google

quite equal in beauty, the Trout may be considered the most game of fresh-water fish. Who that has ever experienced it can forget the first rush of a noble Thames Trout in full season, especially if the angler be spinning from a weir? He dashes down the run, some sixty yards or so, like a flash of lightning, making the line whistle through the rings, and as if determined to carry all before him; now he rises to the surface, and springing out fully a yard, throws a somersault in the air, and tries by that means to rid himself of the hooks; but the skilful angler frustrates this little device by lowering the point of the rod and meeting him half-way. By careful management he is at last tired out, and his captor, taking advantage of a moment's quiet, descends from his position on the weir, and safely lands his prize on the grassy bank below."

The spinning rod I use is of mottled cane, about twelve feet in length, light and somewhat springy, as the bait and trace being rather light (unless when fishing very rapid water), the spring of the rod will be found of great assistance in throwing the bait. The rod should be in four pieces, for convenience of carriage, and with two extra tops; a large wooden button should be screwed to the socket of the butt, to press against the hip when spinning. The "Improved Bronze" winches are amongst the latest improvements in the angler's equipment; their advantages are, extreme lightness and the absence of the annoying glitter inseparable from bright brass; in addition to this, the pin of the handle being fixed into the plate of the winch (instead of the handle being made in the ordinary manner) prevents all possibility of the line catching round the handle and locking the winch.

Some prefer the hard-wood winches. Instead of allowing the line, in spinning, to lie at their feet in the usual manner, they throw the line directly from the winch, using rather a long rod, and wind it in again on to the winch, instead of drawing it in with the hand. But as these wooden winches, or reels, run extremely easy, they require considerable care in use; for if the line is thrown from them with the least jerk, the bait will go in any direction but the right one, and when it has dropped in the

Digitized by Google

water and the line has ceased running out, the winch, from the impetus it has received, will run on and wind the line the reverse way, often entangling it, and getting it into knots. Still, for use from a weir, or in long grass, the wooden winch is very handy, the best patterns being Figs. 7 and 8 (page 20), made either of wood or ebonite.

We next come to the line; this should be of the best plaited silk, from sixty to a hundred yards in length, fine, and properly prepared with waterproof dressing, which prevents it from kinking. It is impossible to throw a bait properly with a line that kinks or that curls up in knots, as the undressed lines invariably do when they are soaked with water. Be particular to dry the

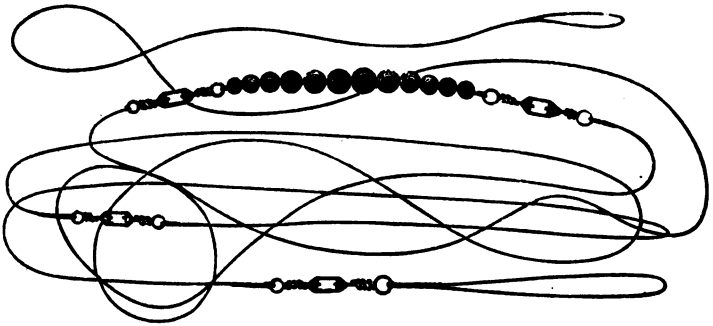


FIG. 36.—TRACE FOR TROUT.

line well after use, before putting it away, in order to keep it from rotting.

The next thing required is the trace. The one I use in the Thames is about two yards in length, of gut, slightly coloured, with four swivels, and from eight to sixteen shots (or a hanging "*Field*" lead) in the middle of the trace, as in Fig. 36; the same style of trace may be used in any river, varying, of course, the size and weight according to the size of the fish and the rapidity of the current. In the Colne, and similar small rivers, I should use fine gut for the traces and flights of hooks, weighting them in proportion.

An extremely useful weight for the trace is that known as the

Digitized by Google

"*Field*" lead. It will be observed that the lead is made so that all the weight will be on one side, the other side being just thick enough to cover the hole through which the gut passes. When in use, the weight being entirely underneath, it prevents the line above it from turning round or kinking, and if the stream is strong, will be more effectual if hung on a wire underneath the line, as in Fig. 37.

There are a great variety of flights used in Trout-spinning. The one I prefer consists of three triangles, a sliding lip-hook, and a reverse-hook mounted on gut. Drawings of other patterns, which will be serviceable for Trout if made on a small scale on gut, will be found in Chapter VI.

The "Water Witch," or "Chapman" spinner, shown in Fig. 51 (page 88), will be found a first-rate Trout-tackle,

FIG. 37.—THE "FIELD" LEAD.

made small enough for Minnow, or small Bleak, and mounted on gut; it is easy to bait, and spins well.

The "Bedford" spinner (Fig. 38) is an improvement on the Water Witch; the centre blade is pushed down the bait as far as it will go, the arms A and B being first undone and opened. When the bait is on, the arm B is pushed through the bait and locked by A, thus fixing the bait securely. The long flight should have one hook of the upper triangle inserted in the bait, leaving the short triangle flying loose.

The baits for small streams may be either Minnows or small bright Gudgeons. I prefer the latter, as they spin better and last longer, whereas the Minnows soon tear and become useless. When these are scarce, Whitebait preserved in diluted Formalin have been found very useful, as they will keep good for a long time. For larger streams, I use a small Bleak, which has, when

Digitized by Google

properly placed on the hooks, a very bright and star-like appearance in the water, although, like the Minnow, it soon wears out, unless used with great care. The bait should be always placed on the hooks with a scrupulous regard to its spinning truly; for I have always found that the better the bait spins, the better the Trout likes it, and, as a matter of course, the greater the chance of success.

Of artificial baits, one of the most natural as well as one of the most successful is the "*Bell's Life*" spinner, in which the spinning power is in the tail. They are, undoubtedly, the most

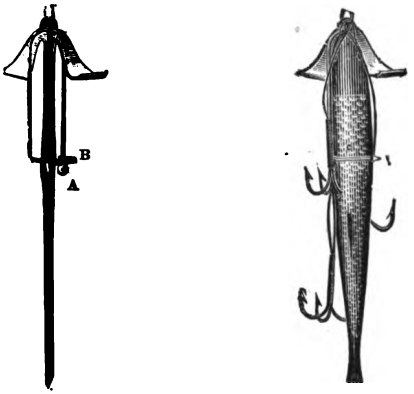


FIG. 38.—THE "BEDFORD" SPINNER.

life-like baits ever brought out, and several good Trout have been caught with them. On the 27th April, 1880, H. P. Hughes, Esq., caught at Shepperton a brace of handsome Thames Trout, weighing respectively 9lb. and 7½lb., with one of these baits; in each case the Trout took it so completely in the mouth that it required scissors to cut out the hooks. Care should be taken to keep the tail bent at the correct angle, as on this so much depends with regard to the straight spinning of the bait. The late "J. P. W.," formerly Angling Editor of *Bell's Life*, who was very successful with them, pronounced them "perfect" and "quite irresistible."

Digitized by Google

The "Cleopatra" (Fig. 39) is a hollow metal bait, in the form of a fish, but made in separate sections, hinged together by pins so as to render it flexible. It is a great improvement on the old style of metal bait, and has a really wonderful

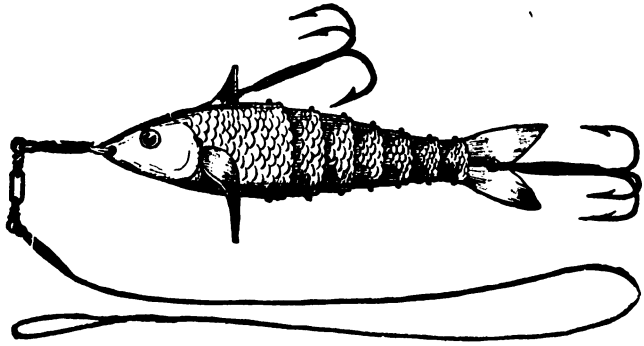


FIG. 39.—THE "CLEOPATRA" BAIT.

appearance in the water. It is made in silver for coloured water, and in gold for clearer streams, and is a very killing bait. The "Gregory" (Fig. 40) is also of metal, but not jointed.

The "Devon," "Angel," or "Totnes" Minnow is a different

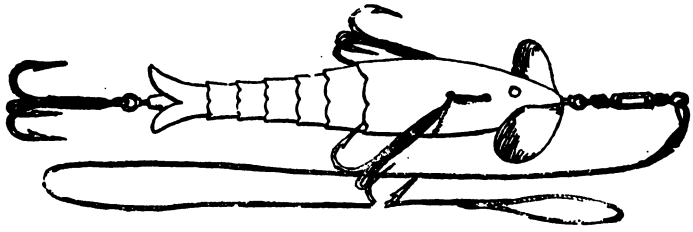


FIG. 40.—THE "GREGORY" BAIT.

style of metal bait, sometimes used entirely bright for coloured water, or with the back painted brown for bright rivers. It will be noticed in Fig. 41 that the bait being divided lengthwise in the hinder half of the body, the fly-triangles project from

Digitized by Google

either side through the division. The bait being loose on the mounting, when a fish is hooked, it will often be found that the bait is blown up the line, leaving the hooks alone in the mouth of the Trout. There is a swivel just inside the bait, but it is better to have two or three more on the gut trace. A friend of mine who used to fish a small Welsh stream, which in parts was not much wider than a ditch, could catch more Trout than anyone else who fished the same water, by using a rather long, light, and stiff rod with a fine line and a small "Totnes" Minnow. Instead of walking direct up to the river, he would crawl up on his hands and knees till within reach of the water; then, dropping the bait gently above a hole, he would draw it sufficiently sharp down-stream to spin it properly,

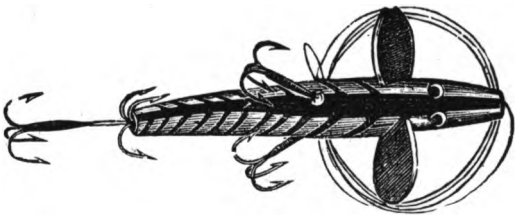


FIG. 41.—THE "DEVON," "ANGEL," OR "TOTNES" MINNOW.

and used to catch Trout from parts of the brook that many others would have passed without trying.

The "White Phantom" bait is also good when the water is slightly coloured, the ordinary painted ones being used for clearer water; they are made of silk, and being hollow, fill to the shape of the minnow when spun in the water; on being seized by the fish they collapse, leaving him with three triangles in his mouth, instead of the coveted morsel.

A very light and effective Minnow for use with a fly-rod is made of quill, but, as with all other baits and tackle, there are two qualities, the one made of clarified quill, tapered and properly coloured, while the other appears to be made from an old tooth-pick, and is anything but inviting in its appearance; still, the latter is "cheap," although far behindhand in finish. A very

Digitized by Google

neat little imitation of the quill is made of celluloid, which is light and durable.

Figs. 42 and 43 show baits which have been very successfully used like a fly, being very glittering in the water. They are useful in the rough, shallow waters found in most of the Trout streams. A larger variety of the "Leopold" has peacock herl wings and is a spinning Alexandra, or "Halcyon."

FIG. 42.—THE "LEOPOLD" SPINNER.

To throw the spinning bait, draw from the winch as much line as you deem necessary to reach the distance you intend to throw. Commence with ten or fifteen yards; when you are able to throw that length of line neatly, increase it a yard or two at a time. A master of the art will throw from forty to fifty yards of line, but on no account have out more line than you can conveniently manage: if you do, it will only be in your way, and when fishing from the bank you will be sure to catch up loose twigs and grass. Drawing the requisite length of line from your winch, let it fall in loose coils in front of your left foot. Hold the rod firmly in the right hand, about eighteen inches up the butt, the wooden button on the socket of which should be kept tightly to the

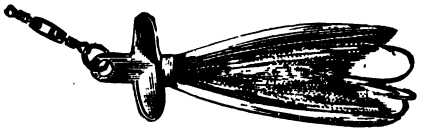


FIG. 43.—THE "HALCYON" SPINNER.

hip; draw the line in with the thumb and first two fingers of the left hand, till the bait hangs about five or six feet from the top of the rod. Bring the point of the rod round to the right, to give the bait the necessary swing, and throw the bait sharply to the left (or *vice versâ*, as occasion may require), at the same time letting free the line in the left hand, and still keeping the butt tight to the hip; the bait will then be carried out to the full extent of the line, the coiled portion running freely through the rings.

Digitized by Google

As soon as the bait enters the water, spin it either across or against the stream; in fact, in any direction that the nature of the place may render most convenient to yourself. The line, which is now held lightly in the same hand as the rod, should be drawn through the right hand, about a couple of feet at a time, by the thumb and the first two fingers of the left hand, coiling it at the feet as before. Keep the rod steady, with the point about a foot from the surface of the water, holding it in such a manner that the top may keep a slight strain upon the line, which should not be drawn in too fast at each backward motion of the left hand. The beginner in the art should learn the method of gathering up the line in the left hand, as practised by the Thames punt-men; he will find it extremely useful when fishing from a weir. "Let him observe a first-rate Thames spinner standing on the top of a weir (a performance requiring rather a strong head and good nerves) casting his bait into the foaming torrent below; now gathering up the line with the thumb and little finger of the left hand, and again throwing out the spinning-bait from a twelve or thirteen feet rod with the right hand, at the same time letting go the gathered line, and spinning the bait across the eddies in a masterly manner, while the left hand is again collecting the line for another throw. All this should be seen to be admired and imitated, for no description can do it anything like justice." This was my advice, in "Spinning and Trolling," to the novice in the art, and I can only repeat that the best way to become proficient is to observe and imitate a first-class fisherman. Of course it must be remembered that the foregoing description of a Thames weir was written when they were very different from what they are now. At present they have handrails and a variety of other protections of which no one even dreamt thirty years ago. Although, when spinning, the fish will often hook himself, yet it is safer to strike with a short and moderately strong jerk of the wrist as soon as the bait is taken; playing and landing him *secundum artem*. Be careful not to lift the bait from the water till it is quite close to the edge, if fishing from the bank; Trout will frequently follow it close up.

June, July, and August are the best months for using the *worm*. Fish with a light 13ft. cane rod, with upright rings, and

Digitized by Google

a very fine running-line. If the water is very clear, the best places would be under bushes, or by the side of piles, etc. The worm may be used either with or without a float; should you intend fishing with a float, use a small quill, ascertaining the depth as directed for Perch (page 113); keep, if possible, a few yards above your swim, and occasionally throw in a few worms chopped in small pieces. The bottom line should be of the finest gut, and the hook about No. 5 for a worm, or No. 9 for gentles; when baiting with these, throw in a few carrion gentles, now and then, at the head of the swim. The "Stewart" worm tackle, made with three hooks, can be used with a fly-rod, casting up-stream without any shots on the line; and in this style of fishing, a great point is to throw lightly (so as not to injure the worm) and with certainty, to the required part, avoiding any sudden jerk which might tear the bait.

In fishing small streams in this manner, it will be found preferable to do without any shots whatever, allowing the bait to travel naturally with the current and working round the eddies, its own weight sinking it to a sufficient depth, and the stream carrying it again out of the eddies in the same way that a worm would go if washed down in the ordinary course; therefore the only times when the shots are necessary will be when the water is too deep and rapid for the worm to sink deep enough for the Trout to see it, or when the wind is too high for the line to be kept in the water without them. A small Lob or Marsh worm, well scoured, or a large Brandling, may be used; but always be careful to take a sufficient supply: few things are more annoying than to run short of bait just when the Trout are feeding.

When a Trout takes the worm a slight pull at the line is generally the first notice the angler receives; there is then usually a running-out of the line and an even pull. When this ceases, which shows that the Trout has reached his resting-place, the angler should strike. When the "Stewart" tackle is used, strike at the first pull. Always throw the worm a short distance above where you think a Trout is lying, so that the worm may sink well when it arrives there, as Trout take it best near the bottom.

Live-baiting for Trout is practised with some success in the

Digitized by Google

Thames. A bright lively Bleak or a small Dace is used, hooked through the lips with a single hook and a triangle on the back; the gut tolerably strong; this tackle is worked with or without a float according to circumstances. The running-line should be fine, and the bait worked down-stream to the place where a Trout has been marked. It is then stopped and manipulated as skilfully as possible. When the Trout is hooked, keep the line clear, and do not hold him too tightly.

Live-baiting is chiefly of use in fishing the weirs. A Trout will work up the run, and make his home, for the time being, behind a pile or large boulder, whence he will make a raid upon an unfortunate little shoal of Bleak, disporting in the sun on the foamy surface of the rush of water from the weir. For a few minutes you will see perhaps fifty or a hundred silvery Bleak, working hard to hold their own against the heavy stream, when a dark brown mass, apparently a bunch of weed, lying quietly in the eddy behind a big pile, suddenly turns, and, rising to the surface, dashes on the shoals disclosing the brilliant panoply of a big Thames Trout, in full condition, glittering in the bright sunshine with all the colour, of the rainbow. The Bleak scatter in all directions, jumping out of the water and appearing like a shower of silver rain; the Trout has taken his prey, and retires again to his haunt behind the pile.

Now, it is simply by noticing these little occurrences that occasionally the sharpest Trout may be circumvented. Of course, we all know that unobservant anglers do not see these things, and can hardly believe anything a little out of the common. Thus it is that a "fish story" is considered as being in the running for the Ananias Prize; nevertheless, there is no need for invention, when facts are often sufficiently curious. Some few seasons ago, an observant angler noticed a good old wide-awake Trout, which eschewed all idea of being taken in by a bait, either real or artificial; he knew a shoal of Bleak scattering over the surface, or a compact little body of Minnows, but as for a single fish with something projecting apparently from his mouth, he would have none of it. Knowing this peculiarity, and watching him go for these little bunches of Minnows, the angler took

Digitized by Google

a three-triangle flight, and putting a live Minnow on each hook, let it slip gently down the run to the pile from behind which the Trout had but recently appeared; dexterously manipulating the bunch of Minnows to the side of the eddy, there was a grand rush, and the big Trout was at last hooked, and eventually safely landed.

Digitized by Google

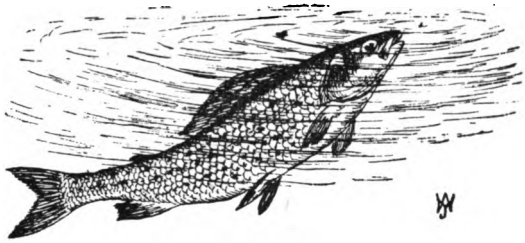


FIG. 144.—GRAYLING.

CHAPTER VI.

GRAYLING, OR UMBER.

THIS lovely fish is by family name a *Salmonoid*, belonging to the genus *Thymallus*, and is the species *Thymallus vulgaris*. There are five species, inhabitants of the temperate zone, and to be found in Northern Europe, Asia, and America. Those which are commonest are *Thymallus vulgaris*, of our own and Continental rivers, and the *Thymallus signifer*, or *Poisson bleu*, of the Canadian voyageurs. Our *Thymallus* we call "Grayling"; in France it is known as "l'Ombre," and in Germany as "der Asch." Immediately upon being caught, and when in high season, the Grayling emits a very delicate fragrant odour of a thyme- or violet-like character; but in a very short time after exposure to the air, this delicate aroma passes off, and then is left the cucumber-like fragrance which is common to several Salmonoids—notably *Osmerus eperlanus*, or Smelt. But Umber is derived from the Latin *umbra*, hence this fish is so called from gliding into and out of sight like a shadow. Out of the river depths the Grayling rises like a flash, and departs as a shadow, noiseless and swift, breaking the surface in silent rings, and showing no dash like the Trout.

The native distribution of Grayling in Great Britain is limited to a certain number of streams in England. In Scotland, Grayling are to be found indigenous in Orkney only.

Digitized by Google

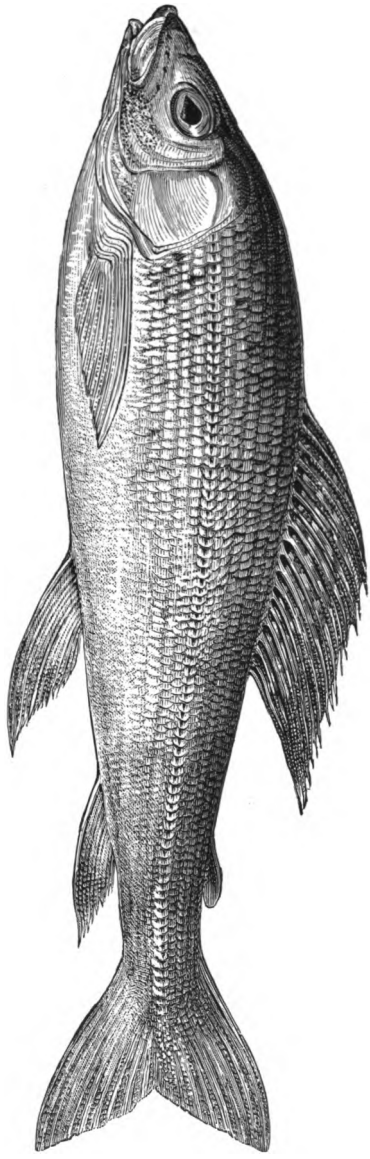
The following is a list of the principal Grayling rivers—Blithe, Churnet, Clun, Corve, Dee, Derwent, Dove, Hodder, Itchen, Lugg, Ribble, Swale, Stour, Teme, Test, Trent, Ure, Wharfe, Wiske, and Wye. These all contain Trout as well. The above-mentioned are, of course, but a few of the rivers of England; though they run through many districts, the majority of counties are untouched. The peculiarity of this fish is, that it will live and thrive only in rivers which have special characteristics in the nature or quality of the water, its temperature, purity, and speed, and the formation of the river's bed, with its weeds and consequent variety of food of all kinds.

Where the Grayling can live, there also can the Trout; but while the Trout delights in a rapid stream, the Grayling prefers one that flows moderately. If found in the rapid stream, it will be noticed that the bed is uneven, either hollowed in places, wherein the fish, somewhat out of the current, may swim with greater ease; or there are rocks, and other kinds of obstructions—even the sunken roots of old trees—which interfere with the stream and break its force. Grayling spawn in April and the beginning of May. Their season corresponds with that period when Trout are out, viz., from the beginning of the month of September to the end of February. Thus, to the fly-fisher, Grayling are most accommodating, for they enable him to exercise his sport all the year round.

Grayling seldom exceed three pounds in weight; when first taken out of the water they present a beautiful violet tint, with dusky lines along the sides and the belly a pearly white; the tail and fins are a purplish colour. The best months for *fly-fishing* are from August to November, and from then till March for bottom-fishing; but when the water is clear, they will rise at a fly, more or less, through the winter. One essential point is to fish fine, using the very finest gut, though the Grayling lies deeper and is not so shy a fish as the Trout; it will sometimes rise a dozen times at the same fly, in as many successive casts, provided the angler stands back out of its sight.

Grayling do not bound out of the water or jump at the bait like the Trout, but will rise with great velocity to the top of

Digitized by Google



GRAYLING.

Digitized by Google

Digitized by Google

the water to seize the fly, descending with equal rapidity to the bottom; the dorsal fin, used for this purpose, being remarkably large. The best flies are the Hackles, Partridge, Dun, Black, Red, etc., small Blue Dun and Hare's-ear flies, March-brown and Sand-flies. When the water is clear and smooth, they will take a Dun-gnat tipped with gold tinsel, beneath the surface, if you use a very fine casting-line and allow it to float with the current; you will not see a "rise," but a peculiar curl in the water, which, with a little practice, you will understand equally well. In the winter, when the weather is warm, they will rise for an hour or two in the middle of the day, at Dun-gnats and very small Soldier-palmers. The Wickham is a useful fly, so are the Bumbles, especially the Honey-dun, and the series of Red-tags, whether with peacock bodies or hare's-ear, are very taking. An ordinary light fly-rod, about ten feet in length, with a fine-pointed prepared line, the same as used for ordinary river Trout, will be equally suitable for Grayling. The artificial Grasshopper is an excellent bait. The following semi-artificial bait is sometimes very successful: the shank of a No. 6 hook is partially covered with lead, and then whipped with light green floss silk; a piece of split straw should be bound on either side with a ribbing of yellow silk. Place a real grasshopper on the bend of the hook, and use it either with or without a very small quill float, which must be fixed on the line at the average depth of the water, using no shots; allow the bait to sink to the bottom, and then draw it up a foot or so, sinking and drawing till a bite is felt.

The rod for *bottom-fishing* should be of light cane, and about twelve feet in length; the winch-line should be fine prepared plaited silk. Use a very fine three-yard gut line and a quill float. If you fish with gentles or wasp grubs, use a No. 9 hook; if with red worms, No. 7 or No. 8. Fish about two inches from the bottom, letting your float swim as steadily as possible. If you fish with gentles, throw in a few occasionally, just above the swim; when using worms, throw in chopped worms, not many at a time, but a very small quantity often. Grayling, when hooked, require gentle handling; having a tender mouth, unless carefully treated, the hold will frequently break away.

Digitized by Google

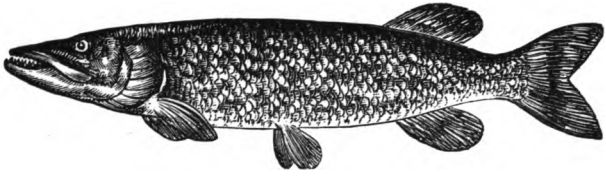


FIG. 45.—PIKE.

CHAPTER VII.

PIKE.

THIS voracious fish has a flattish head, the under jaw being rather longer than the upper one and turning up slightly at the point (Fig. 45); the mouth is very large, and is thickly studded with teeth, the lower jaw being furnished round the edge with large and sharp canine teeth. The body of a Jack, or Pike, is long, with small hard scales; when in season the back is of a greenish gold colour, shading into a creamy white under the belly, and is beautifully marked on the back and sides with large yellowish spots; the eyes are bright yellow, so placed in the sockets as to enable the Pike to see what passes above him; the fins and tail are a dark purplish colour, marked with dark wavy lines. The scientific name of the Pike is *Esox lucius;* French, *Brochet;* German, *Hecht, Wasserwolf;* Italian, *Luzzio, Brochette.*

Pike, or Jack (as they are termed when small), are found in ponds, lakes, canals, and rivers, where there are beds of weeds, and grow to a very large size. I have seen them weighing 40lb. In *The Field* of June 9th, 1877, reference is made to a monster weighing 130lb., which was caught in the Lake of Constance. From March to the end of June they are out of season, resorting to ditches and creeks, or the stillest parts of the river, for the purpose of spawning; at such times the small ones take the bait eagerly, but are only fit to be returned to the water. From July (on the first of which month Jack-fishing usually commences) to

Digitized by Google

October, they are generally found near or amongst sedges, water-docks, or flag-weeds. They are seldom found where the stream is very rapid, but a retreat in the vicinity of a whirlpool, or sharp bend, is a favourite locality. In rivers, about the middle of September, when the weeds are rotting, Jack may be observed lying among the weeds, basking in the sun, appearing too lazy to take a bait, for it is not unusual to see the small fry swimming and playing about their deadly enemy, without his taking the trouble to disturb them. As the winter approaches, Pike retire into deeps, under clay banks, or where bushes overhang the water, and where sunken roots of trees and stumps afford them a stronghold.

The most favourable weather for Jack-fishing is when a slight breeze blows from the south-west, sufficient to ripple the water, and the day is cloudy and dull. Thick water is not favourable, for during a flood, which causes a coloured water, Jack and Pike keep close in shore, among the rushes and sedges which grow near the banks, or in the still bends of rivers, to keep out of the rapid current, remaining almost stationary until the waters clear and subside; but as soon as this occurs, then comes the angler's turn, for having been for some time on short allowance, the fish are then bold and voracious, and will fearlessly take the bait.

The voracity of the Pike is well known to be something enormous. Once, whilst spinning for Trout at Marlow, my gut flight was bitten off by a Jack; putting on a fresh flight and bait, I threw in the same direction as before. The very first throw I caught him, with the first flight still in his mouth; and I know of many similar occurrences. There are several instances of Pike being choked through trying to swallow fish but slightly smaller than themselves. There is a case mentioned of a large Pike seizing a swan by the head while it was groping for food among the reeds in the lake. He got the head down, but the body was too large even for his capacious jaws; being unable to disgorge, he was choked, and the bodies were found a few days afterwards on the shore. Pike will, in fact, seize anything, from a swan to a leaden plummet. While an angler was plumbing the depth in a Roach-swim, in the Lee, some time since, a Jack of 2lb. took the plummet; he was safely landed, owing to the

Digitized by Google

hook projecting slightly from the side of the plummet. It has usually been considered that a Tench is fairly safe from the attacks of the Pike, but one of my friends had ocular demonstration to the contrary a few days before penning this (January, 1898). He was fishing some private water in Norfolk, and landed one fish of 20lb., another of 14lb., and four smaller ones. On opening the largest Pike, he found that it had inside a fine Tench of 2lb., which it had just swallowed before taking his Dace.

Jack-fishing may be classed under four heads, viz., Spinning, Live-bait-fishing, Trolling, and Snap-fishing. *Spinning* is by far the most scientific and interesting method of fishing for Pike, requiring some amount of muscular exertion to practise it properly. The most useful rod is of mottled cane, from twelve to thirteen feet in length. It is best in four pieces, so as to be in a compact form for travelling; and with two extra tops of different lengths, to be used for snap and live-bait fishing. The shoulders of each joint should be double-brazed, the plain shoulders almost invariably sticking in the ferrule of the next joint in wet weather, in consequence of the wood swelling. When this occurs, any difficulty in taking the rod to pieces, arising from such a cause, may be obviated by warming the long ferrule in the flame of a candle; when cold, it may be separated easily. The rings at the end of the tops, and the ring on the butt, should be of steel, to counteract the effects of the constant friction of the line. All the other rings should be fixed upright.

Beside the mottled cane rods, there are others of hickory, with the butt of ash and the top of lancewood. These are capital for heavy fishing and rough work, but I give the preference to the mottled East India cane, as much for its handsome appearance as for difference in weight and its general utility.

The winch should be either entirely a plain one, or the "Improved Bronze" already mentioned. Some fishermen prefer hard-wood winches, which run very easy; these are very useful when live-baiting, as there is nothing to check the fish.

The line should be from sixty to a hundred yards long, of the best eight-plait silk, rather fine, so as to make as little show as possible in the water. It should be prepared with waterproof dressing to prevent kinking.

Digitized by Google

After use always dry the used portion of the line on returning home, either by running it out on a table, or by winding it on a line-drier (Fig. 46). More lines are spoilt by being wound up wet and left to dry on the winch than are worn out by honest use; yet nothing is more deservedly annoying to a careless tyro (who,

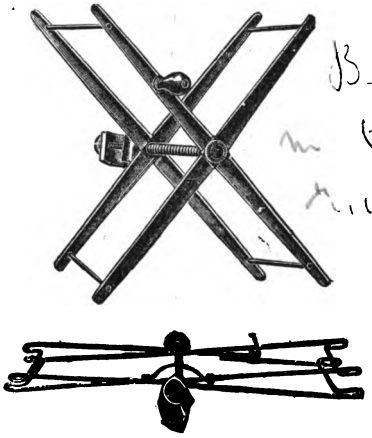


FIG. 46.—LINE-DRIER (Open and Closed).

of course, equally, does not try the strength of his line), the next time he goes out, than to find that his line parts at a very gentle strike. Of course, he says that it is the fault of the line, when the disaster is really caused by his own negligence.

The trace for spinning, which should be fastened to the line

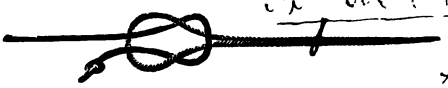


FIG. 47.—METHOD OF FASTENING TRACE TO LINE.

as indicated in Fig. 47 (or as in Fig. 24, page 28)—the end of the line being first knotted to prevent it from slipping when wet—should be of stout single gut, twisted gut, or moderate sized coloured gimp, with from two to four swivels, and about three feet in length; the weight (shots or "*Field*" lead) required on it

Digitized by Google

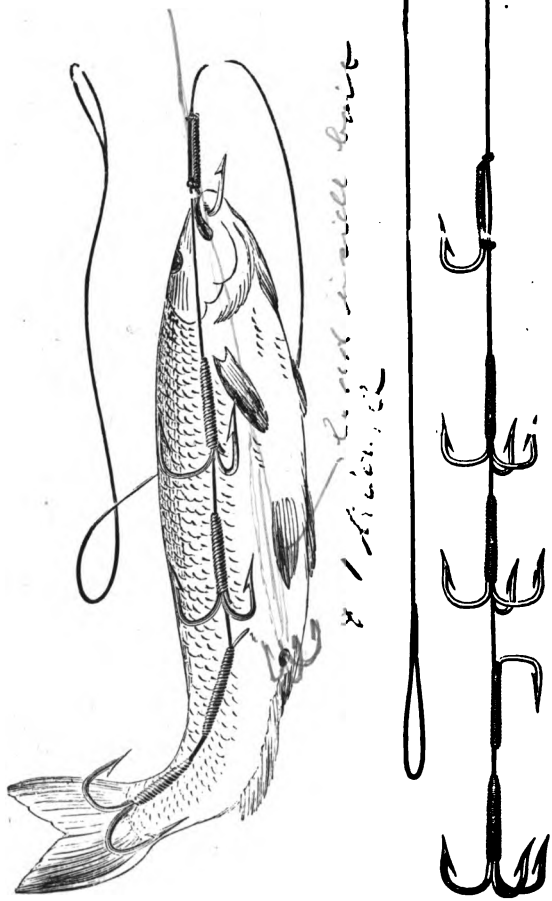


FIG. 48.—THAMES PIKE-FLIGHT.

Digitized by Google

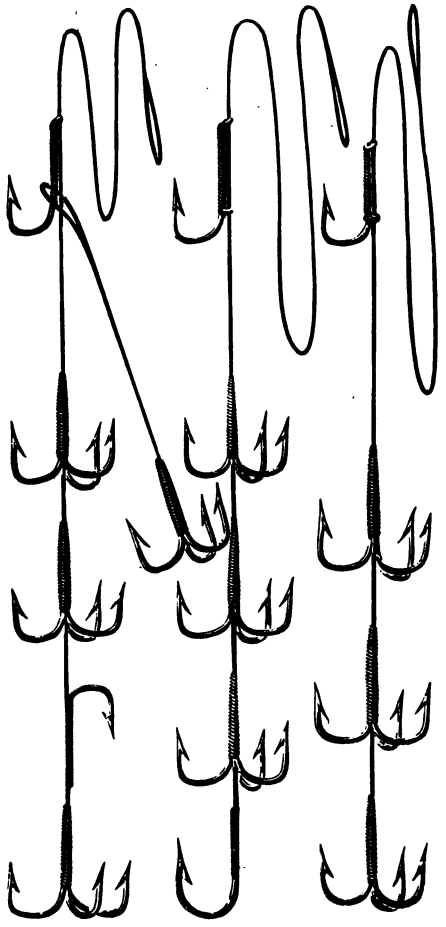
to sink the spinning-bait will vary, of course, according to the water in which it is to be used. A trace which would be heavy for still water, such as a lake, unless very deep, would probably be much too light for a stream such as is found in some parts of the Thames and similar rivers. For my own part, I prefer large Salmon gut for the material of the trace, as it is quite equal in strength to gimp, if not stronger, besides being transparent in the water, and using moderate sized gimp for the flight of hooks or artificial bait.

The flight I use, and consider the best, is composed of three triangles, a reverse hook, and a sliding lip-hook, mounted on stained gimp (Fig. 48), the length of the flight being in proportion to the bait. To bait it: the hook in the triangle at the end of the flight, lying in a line with the reverse hook, is inserted in the centre of the root of the tail; the reverse hook is then inserted in the side of the bait, nearly opposite the vent; one hook of each of the remaining triangles is inserted in the side of the fish, in a line with the mouth, keeping the body straight, and on passing the lip-hook through both lips, the bait is ready for use. By keeping the body perfectly straight as far as the vent, and curving the tail almost at right angles with the body, the bait will spin "true" when drawn through the water. Some anglers prefer the bait to spin with a "wobbling motion," considering that it then more resembles a wounded fish; but I always prefer a straight spinner.

Besides the one just mentioned, there are the following flights, which are on the same principle of curving the tail, but two of them are without the reverse hook:

No. 1 (Fig. 49) is the flight already described, but with the addition of a fly-triangle; this is mounted on a short piece of gimp, having a small loop which is passed down the gimp of the flight you intend to use before it is fastened to the trace, and hangs on the lip-hook. One hook of this triangle may be inserted in the reverse side of the bait, which otherwise would be exposed without hooks. By the way, loose fly-triangles are not novelties; I have used them myself for many years, and am persuaded that if they were more generally employed there would be fewer instances of fish being missed with the spinning-bait.

Digitized by Google



No. 1. No. 2. No. 3.

FIG. 49.—PIKE-FLIGHTS.

Digitized by Google

No. 2 (Fig. 49) has a single hook at the end with which the tail is bent, one hook of each triangle being inserted along the side to keep the bait straight. This pattern, made smaller and tied on blue gut, is more used in Trout-fishing than for Pike.

In No. 3 (Fig. 49) the end triangle gives the necessary curve to the tail, but it is much used in the Midland Counties with the triangles tied about double the distance apart. The lip-hook is passed through the lips as usual; the first triangle is fixed at the shoulder; the second triangle is hooked just behind the dorsal fin, so as to draw the bait up and crook the body, which is thus bent in the middle instead of having the tail curved; the end triangle is allowed to fly loose. I have found this tackle very successful in lakes.

There is another variety of flight greatly fancied by some Thames spinners; it consists of four triangles, and a lip-hook attached to the gimp by one very small loop only, at the end of the shank of the hook. When used, the end triangle is fixed in the tail, and the others are arranged along the side, the second triangle being inserted in the fish so as to curve the tail; before the lip-hook goes through the lips, the gimp is twisted two or three times round the shank of the hook to prevent it from slipping.

Fig. 50 is baited thus:—The baiting needle, to which is attached the loop of the gimp, is inserted in the vent of the bait, pushed through, and drawn out at the mouth, bringing the triangle close up to the vent, and inserting the loose hook in the tail, to give it the necessary curve; the needle is then taken off, and drawing the lead down the gimp, it is forced into the mouth of the bait, which is then ready for use. The whole of the weight being concealed in the bait, none is required on the trace. This tackle is also used without the end-hook, the natural curve of the bait when the triangle is drawn close up to the vent being quite sufficient to cause the bait to spin in an attractive manner.

Fig. 51, the "Water Witch," like the last, has the whole of the weight in the head of the bait, the spinning motion being produced by the pectoral fins at the head. The spear, having on it the lead (which, it will be observed, has a small projecting pin pointing towards the head, for the purpose of retaining the

Digitized by Google

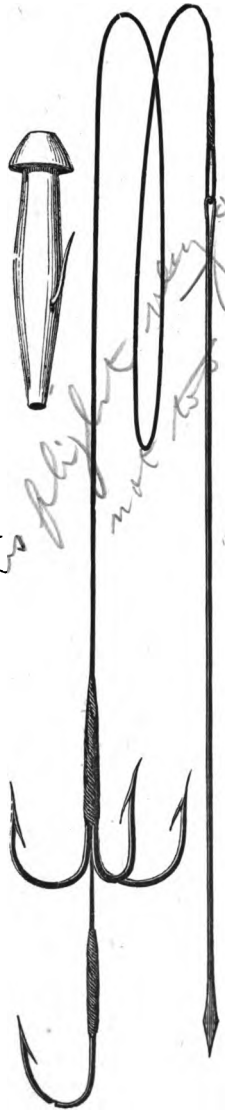


FIG. 50.—HOWSE TACKLE.

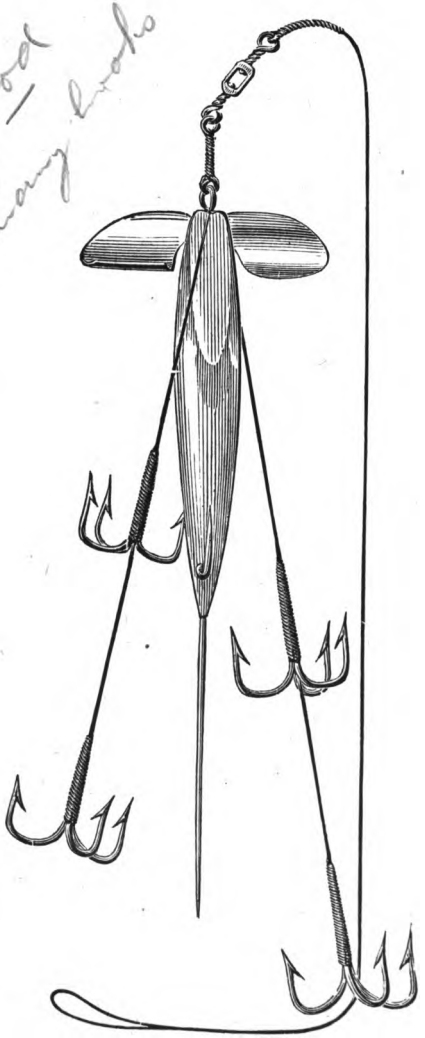


FIG. 51.—THE "WATER WITCH," OR "CHAPMAN" SPINNER.

Digitized by Google

bait in proper position) is pushed down the throat of the bait so that only the fins are left projecting on either side of the mouth, and the fly-triangles are either left loose, or one hook of each is inserted in the bait, which latter method will be safer if there are many weeds.

The "Archer" and "Bedford" spinners (Fig. 38, page 69) are the latest improvements in this form of spinning tackle, the difference being in the mode in which the bait is retained on the tackle; they are both very useful to the tyro, as the spinning motion being imparted by the fins on the tackle, he has not to learn how to give the necessary curve to the tail.

A different description of spinning tackle, but on the first principle of curving the tail, is the "Pennell." The curve is given by a very large single hook, the other end of which is bent at right angles, and being passed directly through the bait, prevents it from slipping back. A couple of flying triangles and a lip-hook complete the tackle.

The best natural spinning baits are Gudgeon, Dace, or small Chub, from five to six inches in length. Some anglers prefer a Roach, but unless a very narrow one be used, it will not spin in so satisfactory a manner as a Dace. I have also spun with a very small Barbel in default of having a Gudgeon of the requisite size. Baiting a flight so as to spin properly is not a very easy operation for a beginner, but practice and careful attention to the foregoing directions will soon overcome these little difficulties. By using a weak solution of Formalin, natural baits can be preserved in bottles, well corked to exclude the air, for a long time in a bright and tough condition.

The artificial baits in use for Pike are innumerable, for new patterns and styles of mounting are constantly being brought out. The "*Bell's Life*" spinner (Fig. 52), however, holds its own as a first-rate killer; a very good imitation of it, made of celluloid, has been introduced, which spins very well, and, being rather light, is useful in shallow water. The "Comet" (Fig. 53), a metal bait, has proved its claims to the favour of the angler, as has also another metal bait, the "Clipper," the latter spinning by means of its curved tails, whilst the former has pectoral fins. The "Otter" (Fig. 54) is a useful bait, besides

Digitized by Google

being cheap; and the old Canadian tassel spoons are always reliable, though the scarlet wool soon changes colour and requires renewal. Then there are the "Gregory" metal bait (Fig. 40, page 70), and the "Cleopatra" (Fig. 39, page 70); the latter is of hollow metal, in the form of a fish, made in separate sections, but hinged together by pins to make it flexible. A similar bait is made of twisted metal, which is not too heavy; it is known as the "Chain-bait."

A large "Phantom" (Fig. 55) mounted strongly on twisted gut, with strong triangles, is at times very killing; but where weight is

FIG. 52.—THE "BELL'S LIFE" SPINNER.

FIG. 53.—THE "COMET."

FIG. 54.—THE "OTTER."

FIG. 55.—THE "PHANTOM."

required for deep water, a large "Devon Minnow" is exceedingly good; one of the latest patterns is painted with a scarlet back, and is very attractive for lake fishing. For Pike-fishing, those baits having the hooks mounted on a ring in the body of the baits, as in Fig. 56, are most reliable and durable.

There are several varieties of spoon-baits, some being a plain bright silver spoon with a triangle at the end and another in the hollow of the spoon; others are made as in Fig. 57, hanging by a ring on a wire, to the end of which is attached a triangle with a bunch of scarlet wool; these have scales engraved on them, and

Digitized by Google

look very brilliant when in use. I have taken Pike with them in lakes.

The manner of throwing the spinning-bait has already been described in Chapter V. When weeds are found within six or eight inches of the surface, the bait should be skimmed, as it

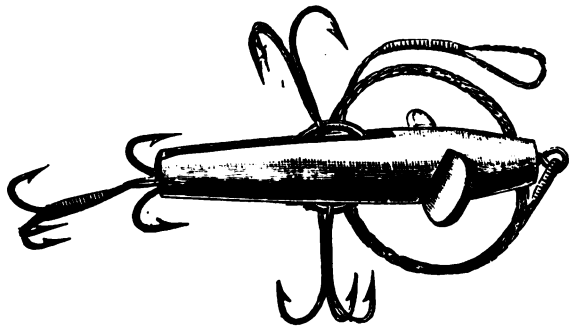


FIG. 56.—RING-MOUNTED DEVON.

were, nearly along the surface of the water. This may be accomplished by using fewer shot and a light bait, and keeping the point of the rod well elevated. Generally speaking, it is not of vital importance which way you spin the bait, so that you do it well and steadily—just sufficiently fast to keep the bait revolving in

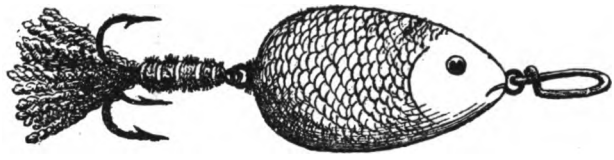


FIG. 57.—TASSEL SPOON.

an attractive manner, at about half the depth of the water, without fouling weeds, but not so rapidly as to make its speed greater than that of the fish pursuing it. Its revolving motion undoubtedly makes it exceedingly attractive to fish of prey, from whom it probably appears to fly madly for its life, although it

Digitized by Google

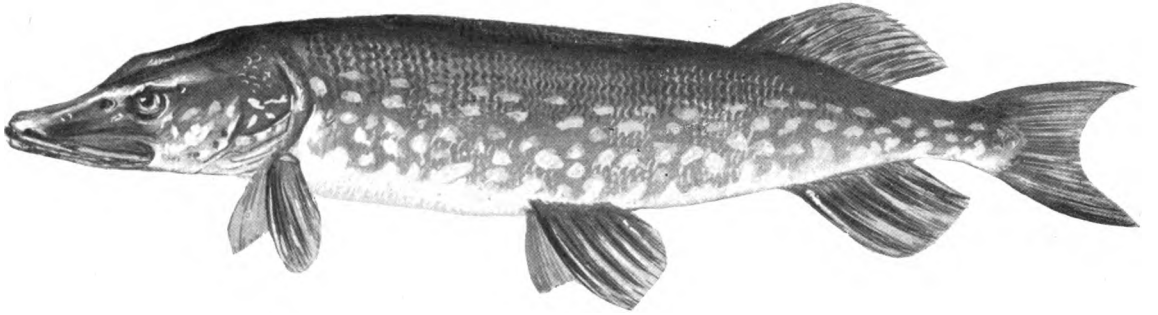
possesses none. Make it, therefore, no difficult task for the Pike to overtake your bait and seize it with facility.

Although the Pike will very often hook himself, still it is better to strike with a short and moderately strong jerk of the wrist, as soon as the bait is taken.

The following directions for landing a Pike will be found in the "Guide to Spinning and Trolling," to which the reader is referred for more detailed descriptions of tackle, etc. :—"We will suppose that you have now hooked your fish, which will, if it be of any size, require careful handling. Do not be in a hurry to land him. More fish are lost by the nervous feeling which shoots through the young angler when he feels the first rush of a Pike, than by any other cause whatever. Keep the point of your rod well raised and the line taut; if he makes for a bed of weeds, and pulls hard, give him line, but still try to turn him by holding the rod the contrary way, and endeavour to lead him back to the place from whence he started. Now he strikes off again; let him go. Now wind him in again, but do not distress your line by keeping it too tight on the fish. He now makes shorter journeys, and seems inclined to come to shore; hold him a little tighter, and feel if he will allow you to raise and show him; but be collected and careful. If fishing from the shore, try to lead him to the nearest opening in the rushess Keep your line free, for he will possibly for a few moment. be more violent than ever, as if he were determined to break the strongest tackle. Give him a few turns more, and he will be quiet enough. Now draw him again in shore, . . . keeping the head a little raised above the surface of the water, so that the nose or gills may not hang to or catch hold of weeds, etc. . . . If you have a friend with you with a landing-net or gaff-hook, your prize is easily landed; but if you are alone, and without a gaff, then draw him as close as possible and keep the line tight, grasp the Pike behind the gills, and throw him up a few yards on the grass."

In lakes or in large rivers, a "Colossal Artificial" fly with two large hooks at the tail and another concealed in the wings, is sometimes used for large Pike with much success. It is managed in a similar manner to the spinning-bait, but without

Digitized by Google



PIKE.

Digitized by Google

Digitized by Google

any weight on the line, and is worked on or near the top of the water.

I have found the Pike-gag of great assistance when disengaging the hooks. It shuts up like a pair of scissors, and when in use, the points AA in Fig. 58 are inserted in the mouth of the Pike, which can be opened to the required extent by means of the bows fitting on the finger and thumb. The gag is kept open by means of the steel extender B, the teeth of which are made to catch on the screw C; but when not in use this portion shuts up on one limb of the gag. The Pike-gag can also be used as scissors, being very strong, and sharpened for the purpose.

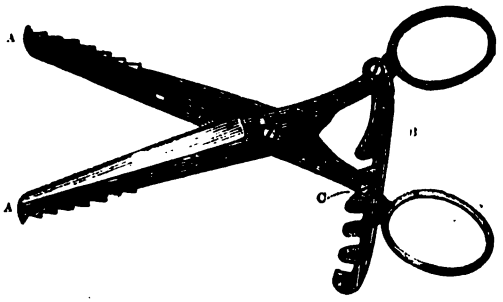


FIG. 58.—THE PIKE-GAG.

Fishing for Jack with a *live-bait*, and a cork float attached to the line, is certainly the most popular, as it also is undoubtedly the easiest method. The small amount of labour required is probably the cause of many preferring it, as it allows them frequent opportunities of resting, when they arrive at a still, quiet place, either in rivers or in lakes. The spinning-rod of mottled cane will do equally well for live-baiting, using a stiffer top. Many anglers use the wooden winch when live-bait fishing; when you have a run (as a "bite" is termed in Jack-fishing), and the rod is lying on the ground, it has the great advantage of allowing the line to run off freely; otherwise it is necessary to leave a few yards of line loose on the ground, to

Digitized by Google

allow the Jack, after taking the bait, to run to the haunt where he feeds, without hindrance; a rod-rester, to keep the rod from the ground, is very useful. For live-baiting I prefer a fine line, as it will float for a considerable time, and is consequently less liable to become entangled with the bait (it will float better still if it be rubbed with strong palm oil). The line should

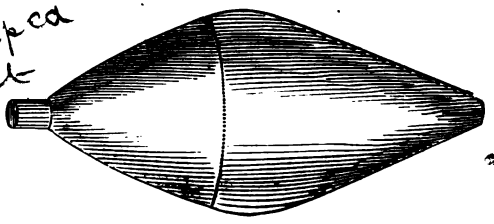


FIG. 59.—FLOAT FOR LIVE-BAITING.

be from fifty to eighty yards of prepared plaited silk. Always have a line long enough at first, for when in constant use, and with the occasional strain on it of a twelve or fifteen pound Pike, besides the friction of the rings, you will find it necessary to break off, now and then, a yard or two from the working end, to keep it in good order.

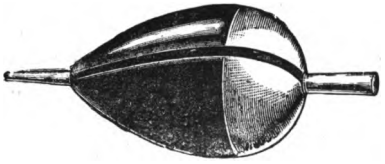


FIG. 60.—THE "FISHING GAZETTE" FLOAT.

The float may be of either of the shapes given in Figs. 59 and 60. The former has a hole through it, and the line, being passed through this, is kept in position by a plug. The latter, known as the "*Fishing Gazette*" pattern, has a cut lengthwise in addition to the hole; the line, being passed through the cut into the hole, is fixed as before by a plug, but can be removed from the line by

Digitized by Google

withdrawing the plug, thus obviating the necessity of untying the trace.

The next requirement is the trace, of moderate-sized stained gimp, or of twisted gut, and furnished with two swivels, and a dip-lead to sink the bait (Fig. 61). The hooks, which should be

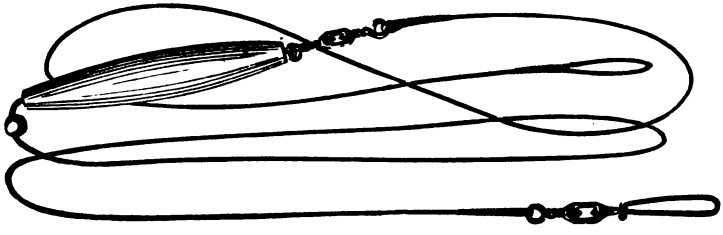


FIG. 61.—TRACE FOR LIVE-BAITING.

tied on stained gimp, about a foot in length, are of two descriptions, single and double.

The single hook, which should be about the size of Fig. 62, may be used either by hooking the bait through the side of the lips, or by passing it under the back fin, taking care not to insert it too low in the fish, or to injure the bone, as the bait would then soon die.

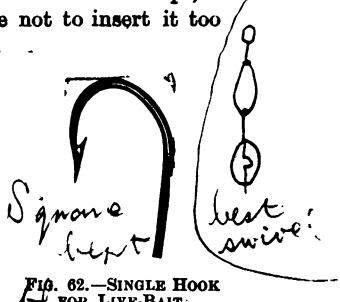


FIG. 62.—SINGLE HOOK FOR LIVE-BAIT.

The double hooks range in sizes proportioned according to the size of the bait; do not have the gimp too stout. To use the double hook, place the loop of the gimp on the hook at the end of the baiting-needle (Fig. 63), enter the point under the skin of the bait on the shoulder and close behind the gills, bringing it out near the back fin; draw the gimp, from which you remove the needle, till the bend of the double hook is brought to where the needle entered. The loop is then fastened on the hook-swivel at the end of the trace, and the bait is ready for use.

When passing the baiting-needle under the skin, do it carefully, so as not to wound the flesh or remove the scales unnecessarily; the bait will then swim nearly as strong with the hooks as without.

Digitized by Google

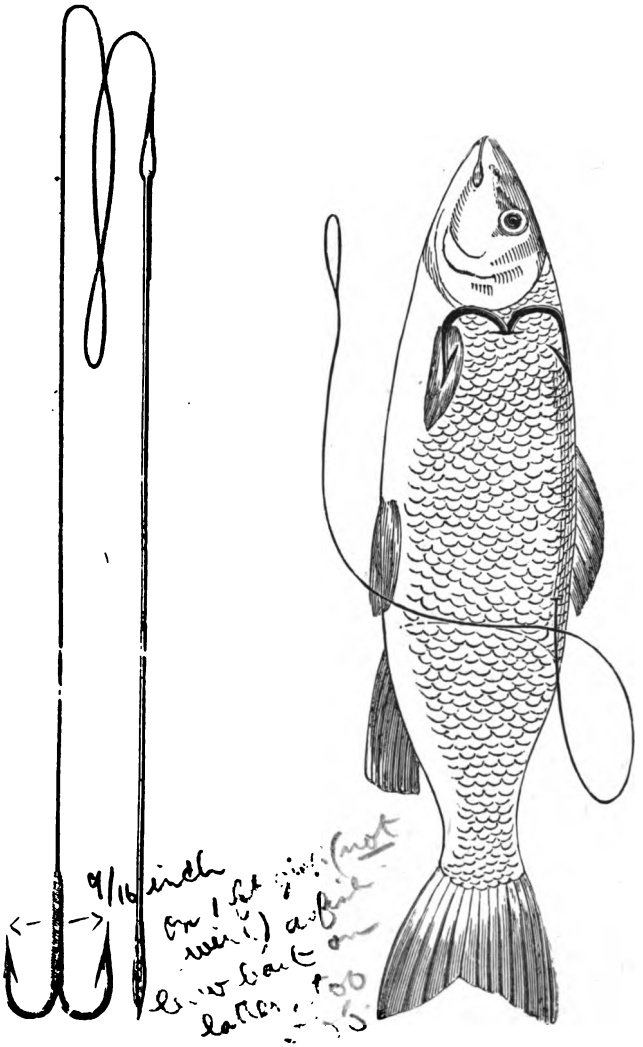


FIG. 63.—LIVE-BAIT ON DOUBLE HOOK.

Digitized by Google

When fishing weedy places, be careful always to remove any small weeds that become attached to the hooks when drawing the bait out of the water.

The baits that live the longest, and are therefore best for a journey, are Thames Gudgeons; they are strong, hardy fish,

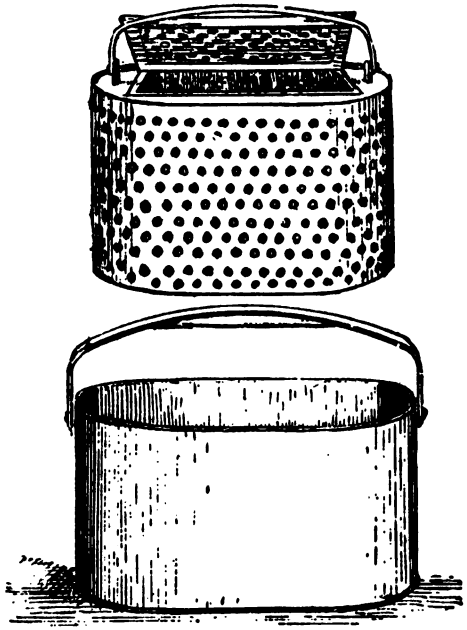


FIG. 64.—THE "IMPROVED" BAIT-CAN.

and will not require the water to be changed so often as others do. Dace, small Chub, and Roach are equally good, but require fresh water oftener than Gudgeons.

To carry the live-baits you require a kettle, which should be a full-sized one of zinc or japanned tin, with square or oval ends. When at the river side, and it is not in use, keep the kettle in the

Digitized by Google

water out of the sun, tying one end of a cord to the handle and the other to a peg, which you can stick in the ground.

The "Improved" bait-can, as shown in Fig. 64, is thus described in the *Fishing Gazette* of September 28th, 1877: "This attracted our attention at the Piscatorial Exhibition as being of practical aspect. The arrangement simply consists of a fish-holder made of perforated zinc, which fits accurately into an oval water-can. It will at once be seen how readily the live-bait placed in the inner vessel can be drained from stale water—placed safely in a running stream if opportunity presents—or be replaced in the outer can after a change of water."

The best time for live-bait fishing is when the heavy weeds are rotten. From October till March, Pike will take a live-bait more freely than at any other time of the year. Fix the float at the proper distance from the bait—as a general rule, not less than three feet, but often considerably more. In the case of a hole ten feet in depth, tolerably clear of weeds at the bottom, I should fish about seven feet deep; that is, I should have the float that distance from the live-bait.

It is a good plan to fix one or two small cork balls, or "pilot floats," above the ordinary float, and about two or three feet apart. This will prevent the upper line from sinking and becoming entangled with that portion below the float.

Begin by dropping in the bait gently near the shore, always keeping as much as possible out of sight; if after a short time you do not have a run, make a fresh cast farther out, and to the right or left. When you take the bait from the water to throw it to a fresh place, draw it slowly and gradually to the surface for that purpose; I have often found Pike when not much on the feed strike at a bait which seemed to be escaping from them.

Try all the still parts and bends of the river, pools, etc.; also near beds of rushes, sedges, candock weeds, etc., in quiet corners. Eddies, and backwaters at the sides of weirs, are likely places for large fish.

When the Pike seizes the live-bait it is generally done sharply, and the float is instantly drawn under water; keep the winch and line clear, watching the float as long as possible, and hold a yard or two of slack line in the left hand, so that nothing may

Digitized by Google

check the fish while he is making for his haunt to pouch the bait. If he runs rapidly, draw the line quickly from the winch, so that he may not be impeded. When he has reached his haunt, and remains quiet, allow about five minutes to pouch; as a general rule, when he has done so, the line slackens slightly. When you have reason to suppose that the Jack is more inclined to play with the bait than to feed, and, when you have a run, he moves a short distance and stops, then moves again and waits a few moments, and a third time changes his quarters: then is the time to wind up the line, and strike smartly the contrary way to that in which he is running, when you will probably hook him in or about the mouth.

The great objection to live-gorge-fishing is, that when the bait has been pouched by a small Jack, it has been almost impossible to withdraw the hook without injury to the fish, and for this

FIG. 65.—PIKE DISGORGER.

reason the use of the live-gorge is now prohibited in the Thames. A special disgorger for double hooks has, however, been patented, which appears to be a really effective instrument in the majority of cases. The disgorger is of wood of the shape shown in Fig. 65 (though the hook drawn with it is far too small for ordinary purposes). The patentee forwards with it the following directions for use :—

"Mount the disgorger on a stick not less than twelve inches long. Open the mouth of the fish as wide as possible, and fix it with a gag; detach the hook-loop from the trace, and pass the loop down the centre of the disgorger until it comes out by the handle; hold the gimp taut, and pass the disgorger down to the hook. To release the hook, press it downwards into the fish's belly, then draw out. In drawing out, be careful to keep the gimp tight against the handle, so as to keep the hook in the disgorger."

Digitized by Google

Trolling, or *gorge-fishing*, was formerly considered the highest branch of the art of Jack-fishing, spinning being then little understood.

The rod, winch, and line are the same as used for spinning. The trace is of moderate-sized gimp or twisted gut, with two swivels and without lead, the whole of the lead being on the gorge-hook, which is baited thus:—the loop of the gimp is attached to the baiting-needle, which is then inserted in the mouth of the bait, run through it, and the point brought out in the centre of the tail. The gimp is then drawn through, till the bends of the hooks fit close on either side of the mouth of the bait, the points turning upwards (Fig. 66). Most anglers tie the tail to the gimp with white thread, to prevent it from tearing when dropped among weeds.

The weed-hook shown in Fig. 67 is much used when the weeds are very thick. It is a short gorge-hook, the gimp being in two parts, joined by small loops. To bait it, the end A is pushed in the mouth of the bait, which is sewn up so as to enclose the whole of the lead as well as the short piece of gimp B. The hooks are thus reversed, and cannot catch any weeds; but on striking, the cotton breaks and the hooks resume their proper position. The bait, it will be observed, always goes down and comes up head foremost. Two turns of the cotton through the *lips* of the bait are sufficient to keep the lead in position.

The best baits for trolling are Gudgeons and Dace. Jack are also taken in ponds (though seldom in rapid waters) by baiting with a frog; use a small gorge-hook, and proceed the same as with a fish-bait, drawing the hooks close to the mouth and stretching out the hind-legs, which must be tied to the gimp. If you use a frog for live-baiting, hook him through the lips with a No. 4 hook; if for snap-fishing, hook him through the skin of the back, striking almost immediately after he is seized by the Jack.

There are various modes of working the gorge-bait, when in the water, but it will be found best to commence near the shore, throwing it like the spinning-bait. Let it sink nearly to the bottom, draw it gradually up till near the surface; let it sink again, draw it a little to the right or left; again let it sink, and draw up slowly, and so on; the next cast, working

Digitized by Google

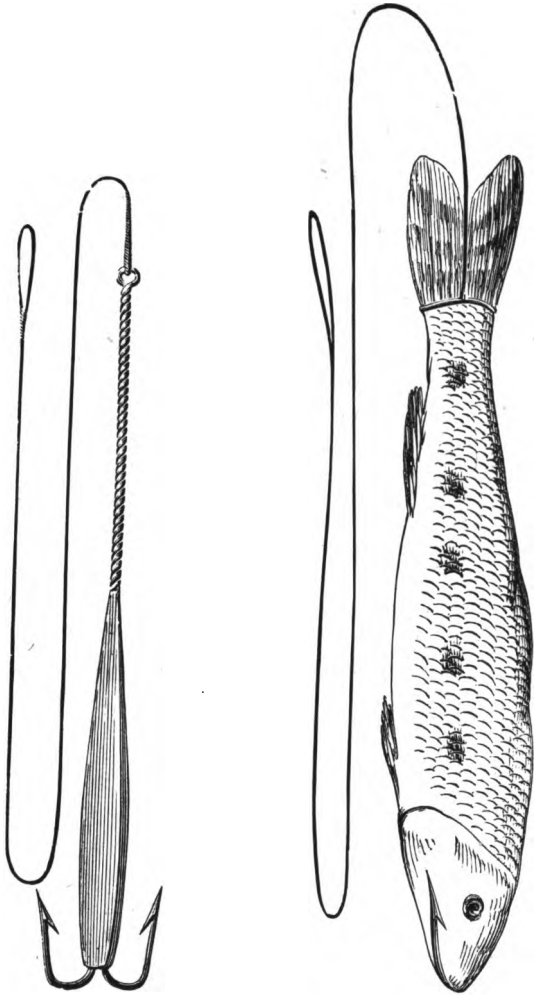


FIG. 66.—GORGE-BAIT.

Digitized by Google

it up and down as before. When you have a run, the line will be pulled or tugged rather sharply; lower the point of the rod, and proceed as described when live-baiting.

Snap-fishing is usually practised at those seasons when Pike do not feed with sufficient eagerness to pouch the bait quickly but the great advantage this style of fishing possesses in the eyes of the true angler is, that it enables him to return to the water

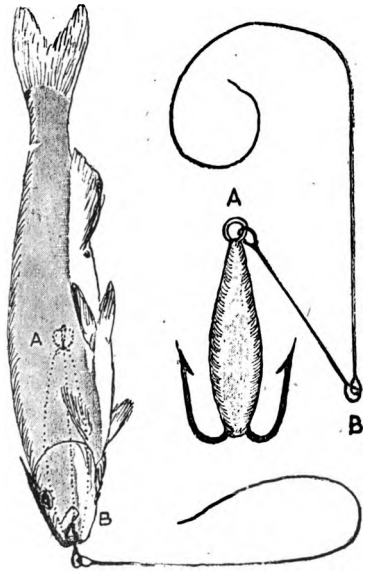


FIG. 67.—WEED-HOOK.

undersized fish, which, if taken with the ordinary live-bait, he would be obliged to kill in consequence of their having pouched the hook. Unfortunately, a large majority of fishermen seem to prefer quantity to quality, and destroy every fish taken, no matter how small, regardless of the fact that by so doing they are spoiling all future sport both for themselves and for others.

The rod should be rather stiff, to enable you to strike sharply; the winch and line have been already described.

Digitized by Google

Sketches of the best snap-hooks are given, though there are many more fancy patterns.

The first is the live-bait snap *par excellence*, to which Mr. Pennell, in his "Book of the Pike," has attached my *nom de*

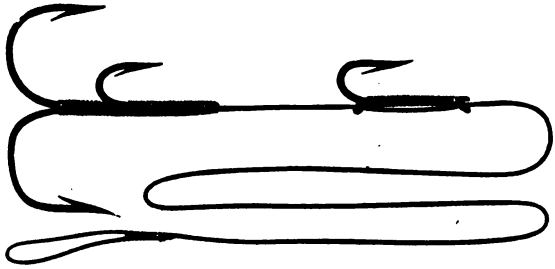


FIG. 68.—THE "OTTER" LIVE-BAIT SNAP.

plume (Fig. 68). It is used thus: the small hook is inserted under the back fin, the point coming out at the other side; the large hooks lie on the back, and the lip-hook is run through both lips. It is used (as are the following) with the ordinary live-bait

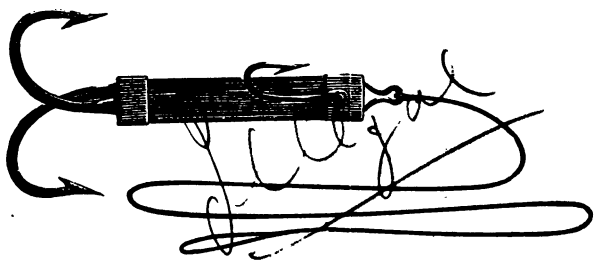


FIG. 69.—THE "SPRING" SNAP.

trace and float. When the Pike seizes it, let him run a yard or two to make sure, and then strike sharply.

The next is the "Spring" snap (Fig. 69) which is baited in the following manner: the small hook is inserted under the back fin of the bait, and the large hooks hang at the side. When the

Digitized by Google

Pike seizes the bait, strike sharply; the large hooks will fly out in contrary directions, the shanks being flattened for the purpose.

The "Saddle" snap is a very effective tackle. The bait hangs on a single hook, which is inserted under the back fin, and a triangle is suspended on either side of the bait, like a saddle, hence the name. The "Francis" snap is made on this principle, but with only one triangle.

The "Pennell" snap is of the same pattern, but instead of being hooked under the back fin, it is threaded with a needle across the side of the bait from belly to back underneath the skin, the triangle hanging *below the bait*. The great objection is, that if the bait has to be thrown far, the skin must necessarily be torn off the bait. The "Francis" style of baiting is by far the best.

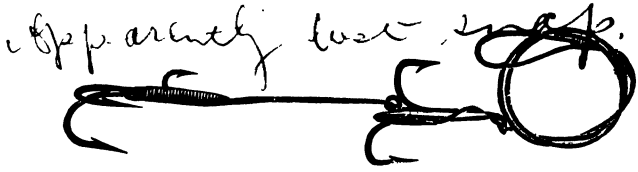


FIG. 70.—THE "JARDINE" SNAP.

The "Jardine" snap is formed of two triangles tied a couple of inches apart at the end of a foot of gimp. The upper one is fixed under the back fin, and the end triangle is hooked, sometimes under the pectoral fin of the bait, and at other times under and behind the ventral fin. A handsome Pike of 35lb., which was caught on this tackle, was on view at the Westminster Aquarium Exhibition of 1877. As will be noted in Fig. 70, the upper triangle is mounted on loops, so that the distance between the two triangles can be regulated by the size of the bait.

When this pattern snap was originally made, many years ago, *all* the hooks were of the same size, and even now many anglers prefer that style; but it is generally conceded that the small fine-wire back hook of the end triangle does not drag the fish so much as a larger one of ordinary wire, and if the barb is good it retains its position equally well; whilst the square shape of the

Digitized by Google

upper hook in the sliding triangle is better calculated for insertion under the back fin of the bait.

The "Bickerdyke" snap-gorge (Fig. 71) is, as its name denotes, a combination of the two styles, the leaded wire (B C) being inside the bait and a "Jardine" snap lying along the outside. The inventor claims that he seldom misses a fish with this tackle, which is useful for fishing deep holes, where a live-bait might foul weeds, etc.

One of the most scientific styles of Pike-fishing is with a single-hook paternoster. This is made of about a yard and a half of strong salmon gut, the lead being attached to the end by means of fine silk, so that it will easily break off if it

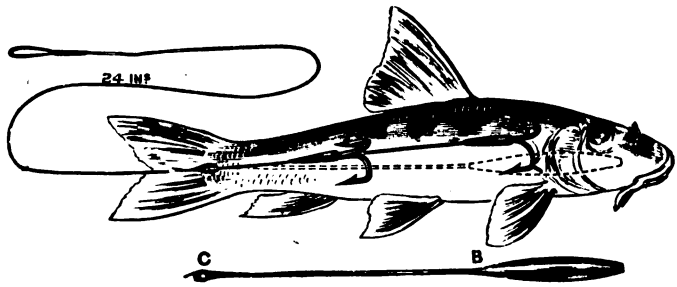


FIG. 71.—THE "BICKERDYKE" SNAP-GORGE.

should foul a stone. About a foot from the end is a buckle swivel, to which the gimp hook is attached; this may be either a single hook or an "Otter" snap, with a good lively Dace, not too large, as a bait. I have had capital sport with this tackle, long before it came into such general use as at present, taking fish in most unlikely places, where it would be impossible to spin, and even a snap with a float would be useless, owing to overhanging bushes and similar obstructions, but where a paternoster can be dropped carefully so as to avoid a foul, and then when a fish is hooked, you must trust to Providence to get him out safely.

In large lakes some good fish are occasionally taken with a monster fly, made on a large double hook. The wings are composed of a pair of peacock-eye feathers, with a few scarlet or blue

Digitized by Google

strips to impart variety. The body is made rather thick, of bright-coloured wool, ribbed with gold plate. The result looks like a brilliant small bird, and is used on a plain swivel trace, being worked rather slowly along the surface of the water.

To hold the flights, traces, snap-hooks, etc., the angler should be provided with a proper tin case, about six or seven inches long by three or four wide, deep in proportion, with divisions, so as to keep the tackle separated as much as possible. The cover of the one I use is in the form of a box, divided to hold traces, extra weights, etc.

Always make it a rule to bait your hook the last thing after you have made all complete, as regards line, float, etc., and on hooking a Pike, do not strain on him too hard. Although I never play a fish longer than I can help, yet when he plays well there is really no necessity to strain the tackle merely for the sake of landing him a minute or two sooner.

And, lastly, remember, when Jack-fishing in a place very likely for them to lie, not to leave after a throw or two only, but let the bait work the place well, especially if you have seen a fish move there before. Try well every foot of likely water, and if not successful, try again as you return. *Nil desperandum!*

Digitized by Google

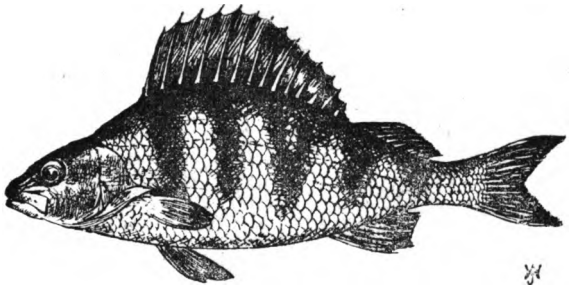


FIG. 72.—PERCH.

CHAPTER VIII.

PERCH AND POPE.

THE Perch is a thick and broad fish, very high on the upper part of the back, with a fine bright eye, small head, and large mouth, well furnished with small teeth, in addition to others in the throat. The tail and belly fins are a bright vermilion, the pectoral and dorsal fins brown. It has two fins on the back, the one nearer the head being armed with strong spikes, having extremely sharp points, which it erects when alarmed or attacked. The angler should be careful, when unhooking a Perch, not to have his hands pricked by this sharp dorsal defence; I have sometimes known it to have unpleasant results. The Perch is covered with strong scales, and is of a bronzy green on the back and down the sides; on these are several dark stripes or shades, reaching from the back nearly to the belly.

The Perch or Pearch, *Perca fluviatilis*, belongs to the order *Acanthopterygii*, or spiny-finned fishes, family *Percidæ*. The other names by which it is known are—*Perche* (French); *Flussbarsch* (German); *Perca* (Latin); *Aborre* (Scandinavian); *Pesce Persico* (Italian). The Perch mentioned by Aristotle and Ausonius was probably a similar fish to our own; but that found

Digitized by Google

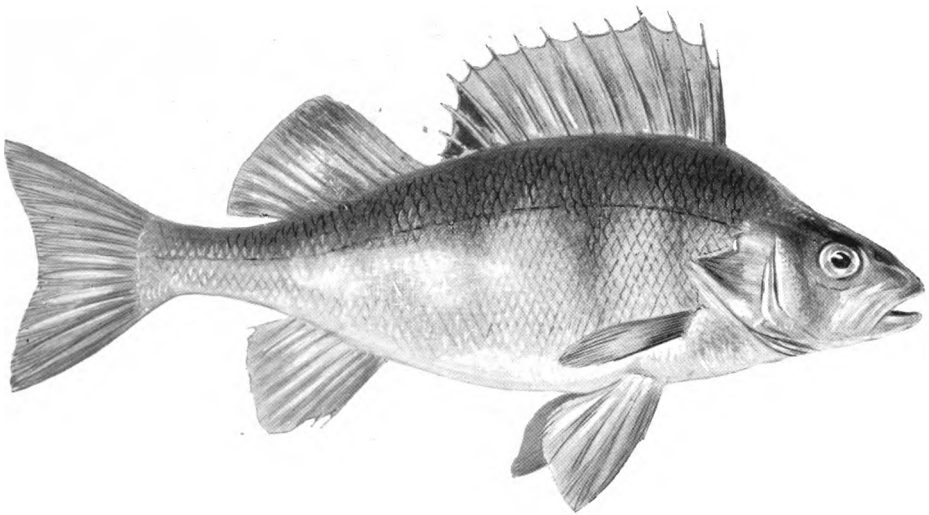
in the works of Oppian and Pliny was more probably his relative, the Sea Perch, or Basse, *Perca Labrax*, which is taken off the coast, and occasionally of large size, Buckland referring to one of 22lb. caught off Herne Bay. Ælian spoke in high terms of the Danube Perch, whilst Ausonius was equally eulogistic of those from the Moselle; the Rhine and the Swiss lakes contain very large specimens, whilst the Perch is well known in our own rivers and lakes from the Land's End to the Tweed. With regard to the sizes to which they grow, at the present time we rarely hear of such large fish as are mentioned in history; it is recorded by Pennant that a Perch of 9lb. was caught in the Serpentine, another of 6lb. was taken in the Birmingham Canal, one of 8lb. from the Wiltshire Avon, and another of similar weight from Dagenham; others from the Norfolk Broads weighed nearly 5lb.

Perch breed very rapidly, depositing the ova from March to May, according to temperature, etc. The female Perch selects a part of the river where there are rushes or reeds growing, or even a piece of sunken timber, or a hurdle, against which she rubs until the ripe ova exude from her. The ova are about the size of poppy-seed, glued together into stringy bands, somewhat resembling frog-spawn. The ends of these bands being attached to the weeds or hurdle, she gently draws herself away, and the strings of ova have a very peculiar appearance in the water, like pieces of white lace. After being impregnated, the ova vivify in the course of a few days, and at the end of the first year, those which have survived will probably be about two inches long; in another year, they will be about five inches long, and after that they attain to spawning capabilities as adult Perch. Buckland mentions that a brace of Perch sent to him from the Norfolk Broads, and which weighed respectively 3lb. 2oz. and 2lb. 11oz., contained, the larger fish 155,620 ova, and the smaller, 127,240 ova.

The *Anabas scandens*, or CLIMBING PERCH, is found in the Indian regions; it is about seven inches in length, and by the Malays is known as the "Tree-climber." Daldorf, in 1797, in a communication to the Linnean Society of London, mentioned that he had caught one in the act of climbing a palm tree near a

Digitized by Google

Digitized by Google



PERCH.

Digitized by Google

pond; the fish had climbed five feet. Holding on to the bark of the tree by the pre-opercular spines, then bending its tail, it stuck in the anal spines; afterwards releasing its head, it took a fresh hold, higher up the tree.

The PIKE PERCH, or ZANDER (*Perca Lucioperca*), is known as (German) *Zandr*, *Sandbarsch*, *Sandra*; (Swedish) *Gos*; (Danish) *Standart*; (Norwegian) *Gjors*; (French) *Sandre*. These fish are plentiful in the Danube, but though found in the Elbe and Oder, are not known in the Rhine or Weser. They thrive on a sandy or clay bottom with rocks and stones; they are shy fish, but grow well in some of the lakes in Schleswig-Holstein, and, like the Basse, are exceedingly voracious. They are found in nearly all the lakes and rivers of Russia, and are taken in the lower Volga in vast numbers in the early part of the year; the roes are salted in barrels and exported, principally to Greece and Turkey, the oil extracted from the fat found in the intestines being largely used in the preparation of caviare. The Zander was introduced into England in 1878 by his Grace the (then) Duke of Bedford.

Referring to the fish noticed in the Scriptures, but not actually named, we may observe that those found in the Jordan and the Lake of Gennesareth were the same as those in the Nile; they were principally of the Bream, Barbel, Carp, and Perch tribes, and the shoals of these, coming up in the night to the mouths of the warm springs of the two Bethsaidas, are said to be most wonderful, covering as they do a very large extent of water. The Nile abounds with fish, and amongst them are some which grow to a very large size, resembling our Salmon. Miss Martineau once had a fish brought to her which was similar to a gigantic Perch, and was about half the size of the man who carried it; for this she only paid 7½d.

Strabo says that even the crocodile of the Nile, a mightier tyrant than the Pike, shows forbearance towards the Perch, which he might well do if the latter were of the size mentioned. The ancient Saxons had as an emblem of patience in adversity and constancy in trial, a representation of a man holding in one hand a bunch of roses, and in the other hand a wheel, standing with *naked feet* on the back of a Perch. In some lakes, such as Slapton and Torcross Leys, where the Perch are in myriads and

Digitized by Google

consequently small, they form almost the only food for the Pike, which, swallowing them as they do, head first, are not much troubled by the back fin.

August, September, and October, are perhaps the best months for Perch, as they are then in high condition and colour. In cloudy weather, they will bite all day; but in general, early in the morning and towards evening are the most favourable periods for fishing.

The Perch is a peculiar exception to the general rule that fish of prey are of a solitary nature. He, on the contrary, is socially gregarious, and as regards taking a bait, remarkably imitative; it being well known that where you have taken one, you should invariably remain some time, when, fishing with the ordinary amount of attention, you will in all probability get all there are in the hole. But, lose one, and although he is naturally a bold biter, the chances are ten to one that he communicates his fright to all the rest, and that they will disappear with him, leaving the angler no other resource than to try a fresh place with more skill. Perch are to be found in the eddies of mill-tails and weirs, in deep still holes, about bridges, in deep quiet corners of rivers, and in ponds. I have known them to grow to between five and six pounds' weight, but from a quarter of a pound to a pound is the ordinary size.

The rod for Perch-fishing should be light, about twelve feet in length, of mottled cane, with upright rings, not too stiff, but sufficiently so to strike sharply from the top. In ponds and small rivers forty or fifty yards of prepared plaited silk line will be enough, on a winch of proportionate size; but in the Thames it will be safer to have a longer line—from sixty to a hundred yards, for in Perch-fishing from a weir you are extremely likely to hook a Trout, or *vice versâ*.

One of the most successful modes of fishing is with the *paternoster*. This is used properly without a float, although some prefer it with; in length it is about a yard and a half, of gut not too stout, with a paternoster lead fastened to the bottom of it by a fine silk loop. This loop is made of fine silk so that, should the lead foul amongst the large stones at the bottom, it may be broken off without endangering the rest of the tackle.

Digitized by Google

On the gut are looped three hooks, size No. 4 or No. 5, which are tied to pieces of gut about five inches in length. The bottom hook should be six or seven inches above the lead, the next about a foot above the bottom hook, and the next a foot above that, as in the sketch (Fig. 73). A recent writer, in describing this tackle, refers to what he terms the "paternoster of tackle makers"—a wonderful contrivance, concocted of hogs' bristles and perforated bone runners for the hooks. I should imagine from his description that he must have unearthed some fossil paternoster of the last century; no "fisherman" of the present day would dream of using such a machine. The hooks should be attached to the main gut simply by loops knotted in so as to project at right angles from it. One of the most successful paternoster fishers that I know uses hooks tied on rather fine-drawn gut, dyed blue, and the number of Perch that fall victims to his skill is wonderful. In three days in June, 1869, he captured with the paternoster at Great Marlow, 312 Perch, the largest weighing 2½lb., and several over a pound.

To use the paternoster, fasten the loop to the running-line as usual, and bait with very small Gudgeons, or large Minnows, varying them with marsh or red-worms; such as a marsh worm on the bottom hook, Minnow or Gudgeon on the middle, and red-worm at the top. Some prefer all Minnows, hooked through the side of the lips. Commence by dropping in near the side of the river or pond, but if there is one place more likely than another, by all means try it first. Let the paternoster sink till the lead touches the bottom, keeping the line rather tight to it. After a few minutes, if you have no success, work it towards you by raising the point of the rod, and drawing in a yard or so of line slowly, still touching the bottom with the lead. When you have a touch, slacken your line and give him a minute

FIG. 73.—PATERNOSTER.

Digitized by Google

or two before striking, which should be done rather sharply; then play, and land him *secundum artem*. It is not an uncommon occurrence to take two at once with this tackle; when well on the feed, you may have one on each hook at the same time.

Another killing way at times is by means of the *spinning-bait*. In this manner I have taken some very large Perch in the Thames, using the same rod and tackle as recommended for Trout: gut traces properly shotted, and small gut flights of hooks. I have also found the artificial Minnow extremely killing. Close to the camp-sheeting at the side of a weir, and in the eddies or backwater at the foot of the spurs of it, are very desirable localities in which to use the spinning-bait; mind, however, that the under-current does not carry the bait down too deep, causing it to foul the sill of the weir. I have had good sport in this way when sitting on the corner of a weir spinning for Trout; I have observed a shoal of Perch working their way up after Bleak and other small baits, among the rocks on the shallow below a tumbling bay (lying between the end of the weir and the shore), and over which there was not quite so much rough water at usual. Proceeding cautiously to work without moving from my position, I dropped the spinning-bait lightly in front of one fine old fellow, who, seeing the glittering temptation, pounced on it and was off into the deep in a moment. With the assistance of my punt man, who descended one of the spurs of the weir with the landing-net, I soon had him in the well of the punt, together with about a score of the largest of his companions, who fell victims one after the others to their insatiable predatory disposition.

For a description of the manner of throwing the spinning-bait, and of the minutiæ of putting on baits, as well as of the various kinds of artificial baits, I must refer the reader to Chapter II., in which they will be found described as fully as possible.

Large Perch are also taken when *live-baiting* for Pike with small Dace, etc.; for a description of which see Chapter VII. Use a gut trace, and hooks tied on fine gimp. The live-bait snap (Fig. 68, page 103), made of a small size, will be found extremely useful.

Perch are also occasionally taken with a bushy Red Palmer, or other bright-coloured *flies*.

Digitized by Google

The easiest way of Perch-fishing is with the *float*. This may be either cork, reed, or quill. The first is the best; have it as small as possible, with due regard to the amount of current in the stream you are going to fish. Use a three-yard gut line, stained blue, and a No. 6 hook. Bait with a marsh-worm or Minnow (the latter may be hooked through the back fin or through the lip) and fish a foot from the bottom at least. The depth of the water may be ascertained sufficiently near for the purpose without a plummet, by setting the float at what you consider the average depth; on trying it, if the float swims properly, set it deeper, and so on till the float rises a little or lies on one side, which it will do as soon as the shots touch the ground; when it does so, about a foot less will be the depth of the water, that being about the distance from the shots to the hook. When you see a bite, give time, and allow the float to go well under before you strike.

Sinking and drawing for Perch, as it is termed, is practised without a float, and with two or three shots on the gut line to sink the bait, which should be a marsh-worm or two bright red-worms. The bait is dropped into holes and eddies, among the roots of trees growing in the water, or close to the piles, etc. Let it sink nearly to the bottom, then draw it up gradually, and so on, sinking and drawing up till you feel a bite, when proceed as already directed.

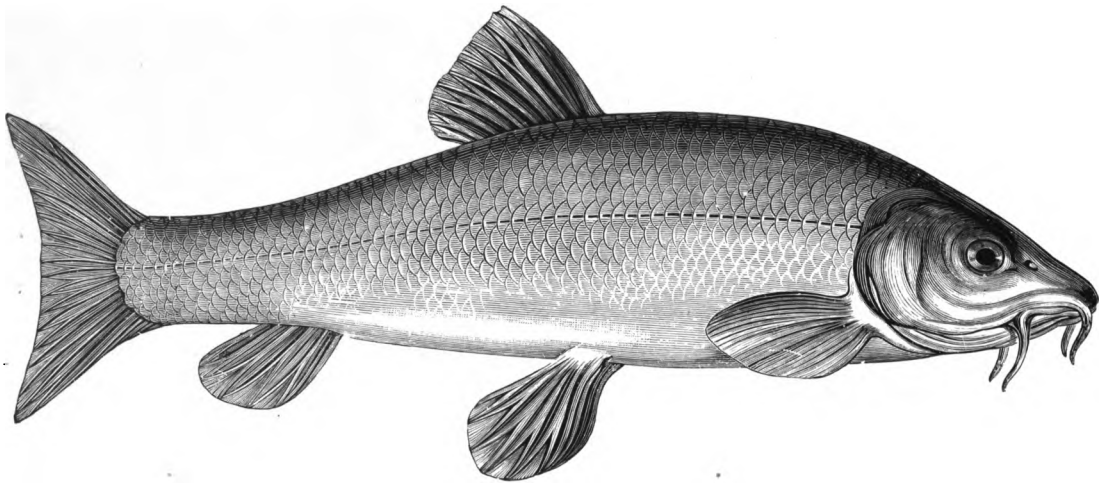
The POPE, or RUFFE, *Acerina vulgaris*, belongs to Order 1, *Acanthopterygii*, family *Percidæ*; French, *Gremille*; Swedish, *Girs;* Danish, *Horke;* German, *Der Kaulbarsch Steinschwert.* They are, like the Perch, of a gregarious disposition, and are found in most rivers, spawning about April, and depositing the ova on weeds and rushes. They are a great annoyance in a Gudgeon swim, and it is the practice to cut off a slice of a bottle-cork and fix it on the spines of the dorsal fin of the fish, which is then turned loose in the river again; this is termed in some parts "plugging the Pope." In colour, the Pope very much resembles a Gudgeon; it rarely exceeds six inches in length, but in shape it is like a Perch, except that the two dorsal fins, so characteristic of the Perch, are, in the Pope, joined and form one fin only. These curious resemblances to two different species of fish have

Digitized by Google

given rise to the idea that it is a hybrid, that is, produced from the ova of the one species impregnated with the milt of the other: of this, however, there is at present no reliable evidence. Gesner (1516-65) gave an account of the Pope in his treatise, "*De Piscibus*," having received a drawing of it from Dr. Caius, who found the fish in the Yare.

Digitized by Google

Digitized by Google



BARBEL.

Digitized by Google

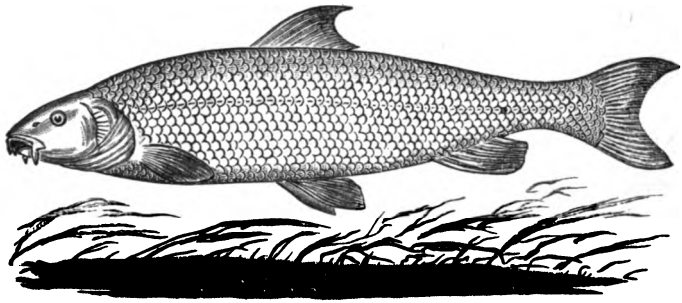


FIG. 74.—BARBEL.

CHAPTER IX.

BARBEL.

THE Barbel, *Cyprinus barbus* (French, *Barbeau;* German, *Die Barbe;* Italian, *Barbolo;* Swedish, *Barbfisk*), is exclusively a river-fish, and a native of many parts of England, especially the Thames, Trent and Lee. Barbel are found in many Continental rivers, in the Danube and Volga especially they grow to a large size; in a Report (1881) from the South African Diamond Fields, there was a notice of a brace of Barbel weighing respectively 35lb. and 40lb., caught in a neighbouring river by the Manager of one of the Diamond Companies. Cuvier says that in localities favourable to their growth they will attain the length of ten feet, but we do not think he mentions the weight of these leviathans or even where they can be actually caught. From 12lb. to 14lb. is a very large size at the present day in the Thames, though Salter records the capture of one at Shepperton, weighing 19lb. 10oz., and another at Sewardstone Mill in the Lee, weighing 19lb.

The Barbel, when well grown and in season, is a handsome, noble-looking fish, of a golden olive brown on the back, and with a silvery white belly. The scales are placed in very exact order; the fins are of a pinkish colour, except the dorsal one, which

Digitized by Google

is darker, as is also the tail, being tinged with purple and of a forked shape, whilst the upper part is curved over to a sharp point, and very strong; with this it is able to defend itself, and often to break the tackle. The head is somewhat pointed, with sharp cunning eyes, and four wattles or barbs under the mouth, from which he is supposed to take his name. The mouth is situated underneath, enabling him to suck the worm from the ground; the lips consist of a fleshy substance, which he can contract or protrude at pleasure, the teeth being in the throat.

Barbel spawn in April and May; the best months in which to angle for them are July, August, and September. Their general haunt is in the deep part of rapid streams. At the end of scours in mill ponds, and under overhanging banks, they may be seen during the summer routing up the sand and gravel with their noses like pigs. "Ephemera" justly remarks that he is "a lazy,

FIG. 75.—"OTTER'S" TRAVELLER AND TACKLE BAITED.

wallowing gentleman, and the Launcelot Gobbo of the subaqueous pantries and cellars. The sound of the smacking of his lips tells you how fond he is of a good morsel. He acknowledges its receipt by the best music he can make, and yet what a shame it is that food should be thrown away upon him! So it is, however, and let him swallow good things ever so swiftly, let him be worm or gentle crammed, his flesh is never the better for it. His great angling value is his obstinacy, which gives him strength notwithstanding the morbid appearance of the muscles; and he will resist your efforts to tow him out of the water with exciting energy. His large fins give him great power in the water, and he works heavily with them to get away when hooked, making them tread and beat the water like the paddles of a slow steamer."

The rod used for *float-fishing* for Barbel should be stiff and light, about twelve feet long, of mottled cane, with an extra top

Digitized by Google

to shorten it about two feet for leger fishing, which requires a stronger rod. The line should be of the finest prepared plaited silk, about eighty or a hundred yards in length, for float-fishing, but should not be so fine to use with a leger. The winch may be either wood, brass, or bronze. It must be understood here, that when I mention float-fishing for Barbel, I refer more particularly to that with the running float, known as the "traveller." These floats are made of cork, long and thin; of various lengths, to carry from a dozen to forty shots; and are fitted with a small ring at each end at right angles with the float (Fig. 75). Through these rings the line passes, the float running or travelling loose on the line; hence its name. To use it: select a steady swim with a tolerably even bottom, free from large stones or other obstructions. There are several swims in the Thames where I have worked the "traveller" successfully, quite fifty yards down the river. One of the best of these swims is in the neighbourhood of Great Marlow. I remember well, fishing it with a friend in July, 1856, and rather astonishing sundry Piscators who were using the leger line from the bank, without having so much as a nibble among them all. In a day and a half we landed very nearly three hundredweight of Barbel, some Perch and Dace, and, though last, not least, a fine Trout weighing five pounds. We should have taken more, but in consequence of the mill stopping, the water was lowered considerably, and the current was so slow that, comparatively speaking, it was dead water. Three of the Barbel were over nine pounds each; many of the smaller ones we returned to their native element, apparently none the worse for their trip to the higher regions. We were fishing from a punt anchored lengthways in the stream, and hooked several of the best fish upwards of forty yards from the punt.

The "traveller" is used thus: the gut hook, size No. 2, is fastened to the gut-line by a small swivel, to give the worm free play. The bottom shot should be about a foot from the hook, then five or six large Swan shot, and instead of a long string of shot above these, it is preferable to use one or two small dip-leads to increase the weight. The running line being now passed through the rings of the float, is fastened to the gut bottom thus prepared; the line should be sufficiently weighted to

Digitized by Google

show quite an inch of the top of the float; otherwise you will not be able to see it a long distance off. After plumbing the depth, which can be easily accomplished by making a half-hitch round the top of the float to fasten the line while the operation of plumbing is performed, remove the half-hitch and plummet, and make a slip-knot in the line about two inches above the top of the float, inserting a piece of stiff gut sufficiently long to project half an inch on either side of the knot; now draw this latter tight, and there will be a sufficient impediment created by the projecting pieces of gut to prevent the float from rising on the line higher than required for the depth of water. It must be obvious that this is a most useful style of fishing in deep water, rendering it easy to fish a deep swim of twenty feet, for although the gut offers resistance enough to the float to keep the bait at the required depth, still it is sufficiently limp, when wet, to draw through the rings of the rod, so as to allow the fish to be brought within manageable distance. The float meanwhile, being loose on the line, drops down on the shots. After the fish has been landed and a fresh worm put on, slack the line, and the float regains its original depth; the weight of the shots carrying the line rapidly through the rings on the float, until it reaches the gut stop. Thus I have easily fished a twenty-foot hole with a rod of twelve feet, which I certainly could not have done so comfortably had I used a fixed float. The sketch of the "traveller" (Fig. 75) shows the gut "stop" knotted in the line.

To fish a Barbel swim successfully, it should be well ground-baited the previous day with lobworms. Judicious ground-baiting is one secret towards the acquisition of a "big take" of Barbel. With regard to the manner in which a swim is baited, there have at various times been propounded different expedients for causing the ground-bait to arrive at that part of the bottom of the river to which it is wished to concentrate the fish. The old Thames style of pitching in enormous balls of clay containing a lot of lobs is somewhat objectionable, except in certain places where you can hardly manage to bait by any other method, such as the eddy at the side of a weir, or similar place, where there is usually a strong stream. By using the clay-balls the worms work out gradually, and thus each batch of bait lasts longer than without

Digitized by Google

the clay. The Nottingham style of throwing out a quantity of chopped worms at the upper part of the swim, though proper enough in a sluggish river, has the disadvantage in a strong stream of scattering the ground-bait over too much space. I therefore think that the baiting-pot, as improved by "J. P. W.," will be found the best thing for baiting a swim. It is in the form of an inverted sugar-loaf about 1ft. deep, the pointed end, which forms the bottom of the pot, having a strong ring soldered to it. The lid is slightly tapered so as to fit loosely the large end or top, and is secured from parting company with the pot by a chain soldered inside. It has also some three or four large holes made in it so as to admit the water when the pot is tilted on one side. When in use, the worms are filled in till they reach within an inch or two of the top, and should be just of sufficient weight to balance the pot when floated down the river, allowing it to rise an inch or so above the water, the lid keeping the worms in till the proper time for their dispersion. A line is fastened to the ring at the lower point of the pot, and when it has floated down a sufficient distance from the punt, a drag on the line will cause the pot to tilt on one side, and the water running in through the holes in the lid, it will at once sink to the bottom. A slight jerk will be quite enough to displace the lid and disperse the worms, when the pot can be quietly drawn back to the punt and the operation repeated as often as necessary. It is obvious that by these means the worms are not wasted over a large space of ground, but are more useful in concentrating the fish and keeping them more in the proper line.

The following day, when you commence fishing, throw in about twenty or thirty lobs (each being cut into about four pieces) sufficiently above where you fish to allow the stream to work them down the swim. Remember that the bait should always be in advance of the float, and as little line as possible in the water between it and the top of the rod. It must be evident that when the float is swimming first and dragging the bait after it, the shot must come first against the nose of the Barbel; and even if he should see the bait, he has to take the trouble to turn round and swim after it, not only disturbing his own equanimity, but probably upsetting the little domestic arrangements of some other greedy old epicure,

Digitized by Google

who, had you not interfered with the first old gentleman, would have remained very quietly sucking in the juicy little morsels like a city magnate over his turtle, till a fine luscious lob sailed down towards him; he would then have gently opened his leathery mouth and allowed it quietly to glide in, discovering, to his sorrow, when you proceeded to disturb his balmy reveries with a sudden jerk, that "all is not gold that glitters." Therefore, to prevent any such unfortunate *contretemps*, and to ensure a good day's sport as far as lies in your power, proceed in a careful manner. Should you be fishing from a punt, with the wind blowing slightly up-stream, your task will be so much the easier. By raising the top of the rod and allowing the line to run out slowly, you keep it as taut as possible to the float, which will then point up-stream; while the tackle will swim in advance of it, the bait naturally being first. When the wind is blowing down the river, the stream at the top is impelled faster than the stream at the bottom, and the float must be managed accordingly, *i.e.*, if fishing from the bank, not keeping the line so tight as to drag the float out of the swim. After a few fish have been taken, throw in some more chopped worms, but not too many; and be particular to calculate as near as possible, when you throw in the first instalment of worms, what distance they will be carried by the stream before they reach the bottom. Do not spread them about, but draw the fish as much to one part of the swim as you can. If the water is very clear it will be better to keep them ten or fifteen yards below you; they will bite better and for a longer time by being kept at a distance. Strike directly the float goes down and play your fish carefully, so as not to disturb his late companions in the swim. Proceeding in this manner, and throwing in a few chopped worms occasionally, to keep the Barbel together, success is certain, always, of course, providing that the place has been ground-baited the previous day, and that you do not overdo it while fishing. It must be evident that as each fish can only eat a certain quantity, by throwing in too much at once you probably satisfy the greater portion and then wonder why they will not feed, when your bait is rendered almost invisible by the cloud of worms you have sent in. But throw in about twenty chopped small, and there will

Digitized by Google

probably be a scramble amongst the shoal attracted by the prospects of an El Dorado of lobworms—prospects which your large deposit of ground-bait of the previous day would seem to warrant. What are eighty little bits among a shoal of Barbel waiting for a fresh banquet? Presently, down comes a *bonne-bouche* in the shape of your bait; it is immediately pounced on by an unsuspecting *gourmand*, who, to the astonishment of his *confrères*, immediately departs in an extraordinary manner for the upper world. Another goes in like manner, and so on through the shoal, a very few chopped worms serving to whet their appetites; until the few that remain have been rendered too shy by the continued hooking and disappearance of their friends.

Making due allowance for the lightness of the tackle, be particular to strike hard enough; the mouth of a Barbel being

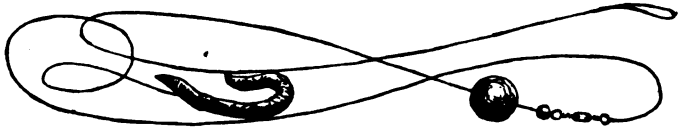


FIG. 76.—LEGER BAITED FOR BARBEL.

very leathery, a sharp jerk is required to fix the hook firmly. Lose a fish and you disturb the swim, and unless they are very strongly on the feed, they will take a little time to recover from their fright.

The *leger* is very good when the water is coloured, or if you are fishing ground of too uneven a nature for the float, such as the side of a tumbling-bay or similar place. It is made in the following manner:—A long-shanked No. 1 gut hook is attached to the leger line, the bottom part of which is composed of two pieces of gut, so as to leave the bait about a yard below the bullet (Fig. 76); at the upper end of the gut is a small swivel; above this is a foot of stained gimp, on which the bullet runs, a drilled shot being on the gimp next the swivel to act as a stop to the bullet, and above the gimp, between it and the line, should be about a yard of blue

Digitized by Google

gut. Many Barbel fishers use a leger-hook of this description:—About two inches from the end of the shank of a No. 1 gut-hook, a small lip-hook is whipped on the gut; when the lobworm is threaded on the larger hook, the worm is drawn up the gut and the head is placed on the small hook. When legering, many Barbel take the head of the worm, and I have caught numbers with the small hook which I should probably have missed had I not employed that useful little addition; the worm also is kept much straighter than when without it.

To use the leger, we will suppose that the place has been well ground-baited as before described. If you are fishing from the bank, throw the leger lightly and steadily a little across and down the stream, as near as you can to where you suppose the ground-bait has collected. Lower the point of the rod, holding it in such a manner as to keep the line taut, so as to be able to feel the slightest bite, and remain perfectly quiet. The bite of a Barbel at a leger may perhaps be best described as a double knock—two distinct little jerks directly following each other, and requiring an instantaneous strike in reply.

If you do not have a bite in ten minutes or so, draw up and make a fresh throw, longer or shorter, according to circumstances, but always in the direction of the ground-bait; first examining the bait to see if some part of the hook may not be exposed.

I have practised this style of fishing with great success in parts of the Thames where it would have been extremely difficult to use a "traveller," owing to the rough state of the bottom, but where, nevertheless, I picked up some heavy Barbel with the leger, ground-baiting with the clay balls.

Greaves are sometimes a good bait, and may be used with either float or leger; in either case the stream should be slow, to allow the bait to lie on the bottom. Greaves should first be broken in pieces with a hammer, and requires soaking some time in water; some recommend that it should be boiled a short time, constantly stirring it, to prevent burning. To bait with it, select the whitest, and put four or five small pieces or a long, narrow strip on the hook, so as to cover the bend up to the point; the hook should be smaller than that used with a worm. Ground-bait with the rougher pieces, but use very little.

Digitized by Google

Cheese is used in a similar manner. The stream must be very slow; before you commence, throw in several pieces cut to the shape of dice for ground-bait. It is used in the following style with the ordinary fixed float: plumb the depth, setting the float about two feet deeper, so that the bait and shots may lie on the bottom straight down the stream, and then proceed the same as for legering; the float will show the bite.

Barbel are also angled for with the ordinary fine *Roach-tackle*, baiting with gentles; and are sometimes taken of great weight. They are frequently caught foul when fishing with the leger, through swimming over the line; the angler, supposing it to be a bite, strikes, and often hooks the fish. They are also often caught early in the season when spinning from the weirs for Trout. I have often been disappointed after playing for a quarter of an hour what appeared to be a good Trout, to find that it was only a Barbel. Mr. Hughes caught one weighing nearly 14lb. in May, 1880, with a *Bell's Life* spinner, and had the pleasure of returning it to the water, as it was caught in the close time.

Digitized by Google

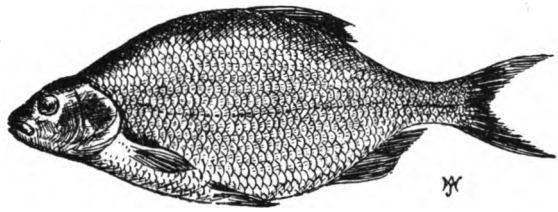


FIG. 77.—BREAM.

CHAPTER X.

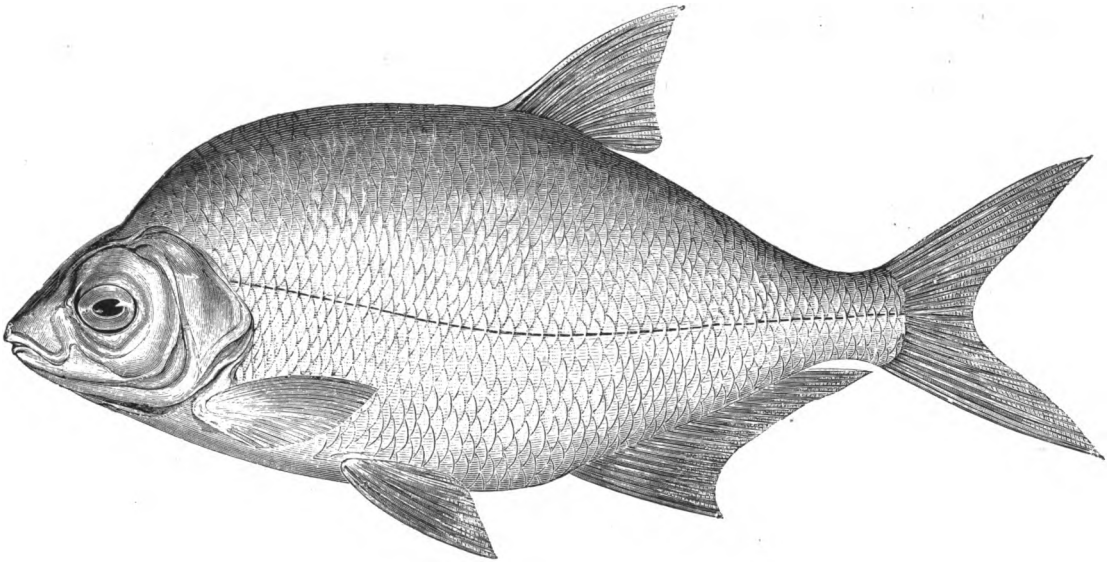
BREAM.

THIS is another member of the *Cyprinidæ—Cyprinus abramis* (French, *Brème*; German, *Blei*). There are two varieties—the Carp Bream, which often reaches a weight of 8lb. or 9lb., and the White Bream, which seldom exceeds 1lb.; though of the former variety, Bailey mentions one caught in the Trent which weighed 17lb. Chaucer says of the Bream:

"Full many a fair partrich had hee on mewe,
And many a breme, and many a luce in stewe."

Walton evidently had a special fancy for this fish, and wrote more sensibly about it than of any of the fish of which he had previously treated. Whatever we may think now of its edible qualities, it is certain that at one time it was held in high estimation. Sir William Dugdale says in his *Hist. Warw.* that in 1454, "A pie of four of them, in the expenses of two men employed for three days in taking them, in baking them, in spices, and conveying it from Sutton, Warwickshire, to the Earl of Warwick, at Mydlam in the North Country, cost xvj*s* ij*d*." They are useful for stocking ponds, or as food for Pike, and thrive best in slow rivers, where there are occasional deep holes; the Ouse is a noted river for them; the Norfolk Broads are celebrated for their stock

Digitized by Google



CARP BREAM.

Digitized by Google

Digitized by Google

of Bream; at Weybridge and Walton-on-Thames I have had some large takes; and the Mole and the Medway are also noted for Bream. They are distributed over Central Europe, northward to St. Petersburg, as well as in Finland and Scandinavia.

The Bream (both kinds) is a very broad, flat fish, with head and mouth small, the eyes large, and the tail exceedingly forked. It spawns towards the latter end of May, and the best months for angling for them are from July to October, in deeps where there is a clayey or sandy bottom. I have known the Carp-Bream to attain a weight of 8lb. Blakey says that in the north of Europe they reach 20lb., but I fancy these giants are somewhat apocryphal.

The best baits for Bream are lob, marsh, and red worms, gentles, paste, and greaves. The rods and tackle have been described in the remarks on Barbel. The place you intend fishing should be well ground-baited the day previous. If you intend using the "*travelling*" float, it would be better at the same time to ascertain the proper depth of the swim; it will save time and trouble, and prevent disturbing the fish the following day when you commence angling. Allow the bait to swim close to the bottom, strike directly you perceive a bite (the float often rising instead of going down), and proceed as directed when Barbel-fishing. Bream-fishing in still water is pursued in a similar manner. Early in the morning and late in the evening are usually the best times. Indeed, one enthusiastic sportsman of my acquaintance camped out in a tent on the banks of the Ouse for several nights in succession, so as to be at work with the rod sufficiently early each morning; this, of course, was going rather to the extreme. I have had extremely good sport in the middle of the day. Walton-on-Thames is, as I have said above, a noted station for Bream, large quantities being taken every season. I have also landed some very fine ones at Weybridge; at Haliday's Hole I caught sixteen weighing from 2lb. to 6lb. each, in a couple of hours, with the leger and lobworm.

The Bream is also taken with *Roach-tackle*, but requires some care in playing. He will try a variety of schemes to get away; he will often turn sulky and keep at the bottom for some time, then make a bolt under a bank or into the weeds, if any should be

Digitized by Google

near. If that does not succeed he will come up sideways, requiring some strain on the tackle to lift him, the great resistance to the water offered by his broad side causing the novice to believe that he has hooked a monster of the deep. When he rises near the surface, he turns over edgeways, the resistance is over, and behold, it is but a Bream!

Digitized by Google

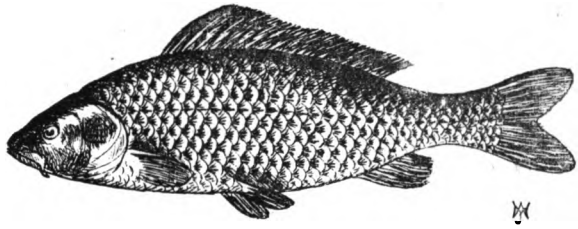


FIG. 78.—COMMON CARP.

CHAPTER XI.

CARP.

THE Carp is a beautiful fish in appearance, of a bronzy gold colour, with large scales, and having two wattles under the mouth-which is small. The fins and tail are of a dark hue, the dorsal fin extending over the greater portion of the back.

The modern names of *Cyprinus carpio* are very much alike—English, *Carp*; French, *Carpe*; Spanish, *Carpa*; Italian, *Carpione*; Swedish, *Karp*; Danish, *Karpe*; German, *Karpfe*. It is a remarkably prolific fish; Bloch found 600,000 ova in a 9lb. fish, and Schneider computed that there were 700,000 ova in a fish of 10lb. weight; Buckland examined a fish which turned the scale at 16½lb., its roe weighed 5½lb. and contained 2,059,750 eggs, so that the number of eggs in two such fish would equal the entire population of the metropolis. In Germany three species, known as the Leather Carp (so called from its having a leather-like skin, quite free from scales), the Mirror Carp (named from its bronzy, mirror-like appearance), and the Common Carp, are cultivated on such a large and profitable scale, that "Carp farming" has become quite a recognised occupation.

Carp commence spawning about May, being governed, like other fish, by the temperature; but having such an immense mass of ova to deposit, and this not being all ripe at once, it is deposited by

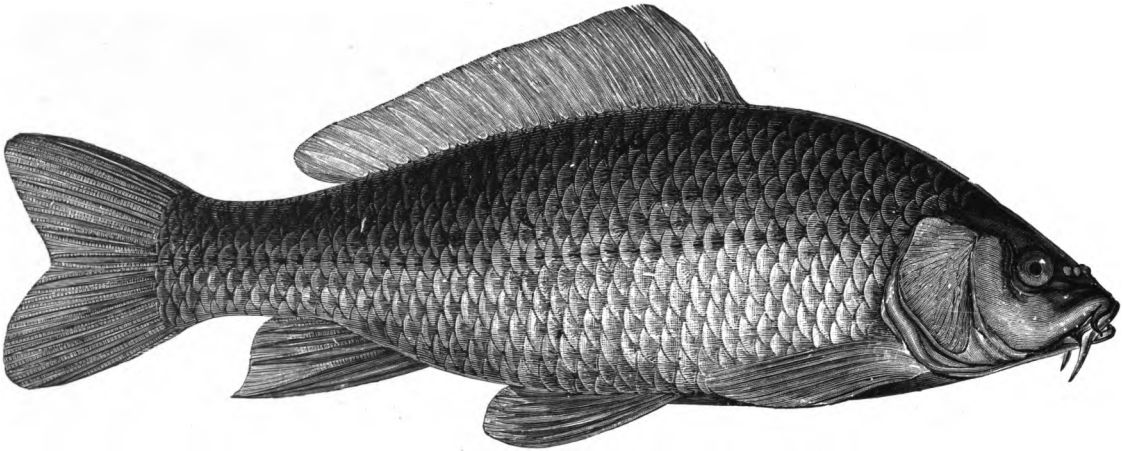
Digitized by Google

degrees, so that the process may extend over a period of three months; the ova are deposited on weeds or flags, vivifying in about a fortnight. Their food consists of worms, insects, and the young shoots of water plants, which may possibly contribute to the somewhat muddy flavour of the fish; if caught in a lake, they will be all the better for a rest for a day or two in a box in running water before being handed to the cook. They are a wonderfully long-lived fish, and have not unfrequently been found alive in the mud at the bottom of almost empty ponds; packed in wet moss, with an occasional reviver, in the shape of a piece of bread soaked in brandy, placed in their mouth, they may be carried in safety for almost any distance. In Holland, they are kept alive for months in cellars in damp moss, and fattened on bread and milk, having almost a cat-like vitality. What would the anti-vivisectionists of the present day say of the proceedings of Samuel Full about the middle of the last century? He cut open male and female Carp, removed the milts and ovaries, and substituted for them pieces of felt, afterwards sewing together the wounds, and replacing the fish in the pond. He found that they recovered, and, growing rapidly, possessed a better flavour than fish which had not been so treated. These observations were communicated to the members of the Royal Society by Sir Hans Sloane, who was then the President.

The Carp is probably the longest-lived of all our freshwater fishes, and is said in some instances to have attained the age of 200 years. Buffon tells us of Carp he had seen which were known to be upwards of 150 years old. They prefer lakes and ponds to rivers; in some they grow to a large size. Salter mentions one he saw taken from the pond in Wanstead Park, facing Tilney House, which, he says, appeared much wasted from age, but weighed then 18lb.; and there are fairly well authenticated records of one of 21lb. taken at Bayham Abbey, near Lamberhurst, in 1870. The largest English Carp was one of 24½lb. taken in 1858 from the great pond at Harling, near Petersfield. In Germany they attain a still larger size; in November, 1878, the *Fishing Gazette* noticed a Carp weighing 40lb. and three feet in length, which was caught near Schwabach in Bavaria, and was presented to the Zoological Gardens, Frankfurt. There is also

Digitized by Google

Digitized by Google



ENGLISH CARP.

Digitized by Google

mention made in *The Field* of February 16th, 1878, of a Carp, 40 inches in length and 26 inches in girth, weighing 31lb., which was caught in the Paris district of the Seine; but I do not remember to have seen one in England that exceeded 16lb. They are extremely shy fish, especially the larger ones, which seem to increase in craftiness as they do in weight and years. There is, however, no rule without an exception, for I have observed some splendid fellows in the ponds of the Palace Gardens at Versailles, which appeared to be perfectly tame, probably owing to being fed with breadcrumbs by visitors. Until within the last few years they have not been numerous in the Thames; though I know of a few artful old Carp which inhabit a certain deep pool at Weybridge: they appear to glory in their extreme wisdom, and will roll over the ine, and appear to bid defiance to the angler. Late in the month of July, 1858, on a hot summer's afternoon, I was Barbel-fishing in the eddy off Ham Point, Weybridge, the water being quite twenty feet deep and as clear as glass. I did not so much as touch a Barbel, but took with my single rod three magnificent Carp, weighing respectively 8lb., 5lb., and 4lb.; ten Eels, nine large Perch, and one Bream; the Carp gave quite as much play as Trout. These were all taken with the lobworm, using chopped worms for ground-bait.

As a general rule the red-worm will be found the most killing bait, but they will at times prefer a well-scoured marsh-worm or lob. The majority of Roach-baits also are used for Carp.

Use a light, stiff rod with fine running tackle and a light float, ascertaining the depth, if possible, the day before, when ground-baiting, as recommended in the preceding Chapter, so as to keep out of sight when you commence fishing, and disturb the water as little as you can. Throw in a few chopped worms occasionally while angling, fish on the bottom, and if in a stream strike immediately there is a bite; but if in still water or a pond, wait a second or two, till the float goes suddenly under, and then strike gently, as Carp do not take the bait so quickly in dead water as in a stream, where, unless it is taken directly, it is carried away by the current and is gone.

When you have hooked a good fish use him gently and patiently; give him line, winding in and letting out, till

Digitized by Google

he is exhausted. He is an exceedingly strong and artful fish, and will try every possible means to get round a post or a stump, or into the weeds, so as to break the line.

The grand secret in Carp-fishing is to keep quiet and fish fine. Some anglers expatiate on the great merits of boiled green peas and pieces of cherries, as very taking baits. One writer advises a worm and a gentle to be used on the hook at the same time, so as to offer the Carp a choice of baits. Probably, had he suggested that a green pea and a cherry be first placed on the hook, it might have been better still; the Carp could then have taken vegetables with his dinner and dessert to follow.

There is another species of this fish, termed the PRUSSIAN CARP (*Cyprinus carassius*), which seldom reaches 1lb. in weight; in shape and colour it is similar to the ordinary Carp, partaking very much of the nature of the Gold and Silver Fish, and, like them, may be kept, when small, in a globe. They are easily caught in ponds during the summer months, with a small red or blood-worm; fish very fine, two or three inches from the bottom, with a No. 10 hook and a very small quill float. It is essential that the bait should cover the entire hook and look fresh and tempting.

The GOLDEN CARP (*Cyprinus auratus*), commonly called the Gold-fish, is a favourite ornamental inhabitant of the drawing-room aquarium. It is believed to have been imported from China during the sixteenth century, and that country is still noted for the wonderful varieties, both of colour and shape, of this beautiful little fish. They seldom exceed a length of ten inches, but are susceptible of extraordinary variations; some have two anal fins, side by side; others have two tails; others, again, have a triple tail, like that of a shrimp; some have a long back fin, others a short one; whilst another variety has two little humps and no back fin. Goldfish breed readily in this country in ponds and tanks; in some of the manufacturing districts large numbers are reared in the tanks into which the heated water from the engines is turned for the purpose of being cooled.

Digitized by Google

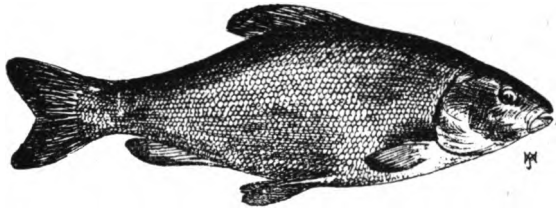


FIG. 79.—TENCH.

CHAPTER XII.

TENCH.

THE Tench (see Fig. 79), *Tinca vulgaris* (French, *Tanche;* German, *Schleihe;* Dutch, *Zeelt;* Italian, *Tinca*), is not so handsome as the Carp, to which, however, it is closely allied; it is short and thick, and when large, nearly as broad as long. The fins and tail are large, and of a purple hue; the scales are extremely small, of a dark greenish gold, and covered with thick slimy matter. The Tench is a pond fish, thriving best in water where the bottom is weedy and muddy; it is also found in rivers of a similar character, and is taken occasionally in some parts of the Thames and Lea. It spawns in May and June, and is very soon in good condition. From July to October are the best months; though if the weather be very warm, they are sometimes taken in March. During the winter they bury themselves in the mud, like Eels. In reference to this peculiarity of the Tench, I take the following from Sir Harris Nicolas's edition of Walton :—"In cleansing an old pond at Thornville Royal, in Yorkshire, in 1801, there was discovered under some roots what was at first conjectured to be an otter. It proved, however, to be a Tench of most singular form, having literally assumed the shape of the hole in which he had, of course, been for many years confined. His length from eye to fork was 2ft. 9in.; his circumference, almost to the tail, 2ft. 3in.; his

Digitized by Google

weight, 11lb. 9oz. (*see* Daniel's *Rural Sports*, Vol. II., p. 263, ed. 1802, where an engraving of the fish is given)." In favourable situations they have been known to attain a weight of 9lb.; but this is of rare occurrence in this country, and they are seldom found to exceed 4lb., although they grow fast. Tench, like Carp, are exceedingly tenacious of life, and when packed in wet grass or moss may be carried long distances without risk.

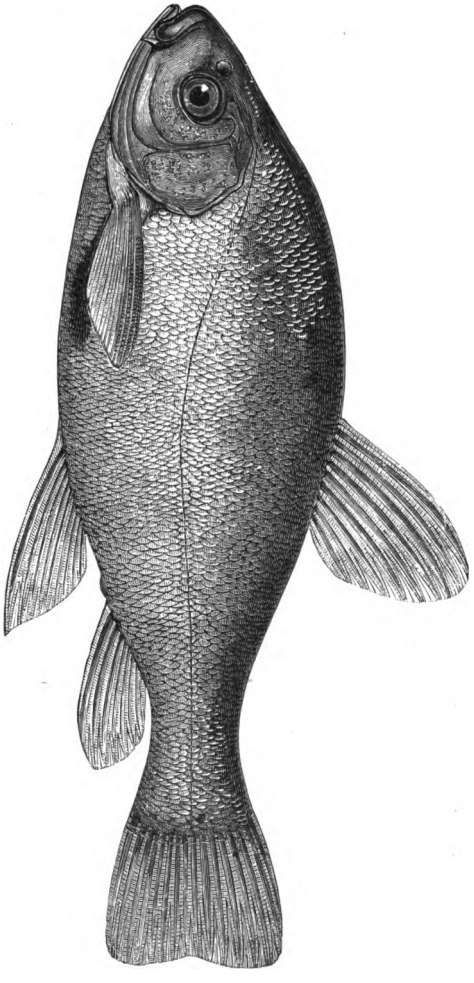
A clear red-worm or small lobworm will be found the best bait; wasp-grubs, gentles, and paste are also used. Tench require ground-baiting in a similar manner to Barbel. A light, stiff rod, with running tackle, should be used, and if fishing in a pond, a small quill float, and a No. 8 hook with a red-worm, or a size smaller for gentle or wasp-grub; if the bottom is very muddy, fish an inch or two from it.

Although the Tench is not a particularly shy fish, yet he bites slower than most others, sometimes remaining with the bait between his lips for a short time before taking it into his mouth; therefore do not strike directly, but let him take the float well down, or, as he will often do, rise with the bait, and cause the float to lie flat on the surface. When this occurs, strike smartly but not too hard, playing him carefully, so as to keep clear of the weeds.

In summer they may often be seen near the surface of the water, among the weeds and lily leaves, when they may be taken by dropping the bait into any little opening you may observe among the weeds. Fish with a stouter line and without a float, with a shot or two about a foot from the hook to sink the bait sufficiently. When you feel or see a bite, strike sharply and land your prize as soon as possible, for in places of this description there will not be much space for playing.

Although there are several ways of cooking Tench, stewing is, no doubt, the best method. The reputation of the Tench as a toothsome fish is, and always has been, amongst connoisseurs very considerable, and there are extant (as showing the appreciation of this fish by our ancestors) many old recipes for the culinary treatment of this dark-skinned denizen of the waters. The following (from the Harleian MSS.) are examples of fish cookery as practised by our forefathers some five hundred years back:—

Digitized by Google



TENCH.

Digitized by Google

Digitized by Google

"*Tenche in Bruette.*—Take the Tenche an sethe hem and rost hem, an grynde pepir, an safroun, bred and ale, and tempere wyth the brothe an boyle it, then take the Tenche y rostyd and lay hym on a chargeoure, then lay on the sewe above."

"*Tenche in Syneye.*—Take a Tenche an skalde hym, roste hym, grynde pepir an safroun, brede an ale, and messe it to gederys, take onyonys, hakke hem an frye hem in oyle, and do him there to and messe hem forth."

"*Tenche in Sawce.*—Take a Tenche whan he is y sothe, and ley him on a dysshe, take percely and onyonys and mynce hem to gederys, take pouder pepir and canelle and straw thereon, take vynegre an caste safroun thereon, an coloure it an serve it forth whanne alle colde."

Thus far these savoury ancient recipes, which (slightly amended) might even now serve as good practical methods of dressing this fish.

Another variety of Tench, known as the GOLDEN TENCH (*Goldschlei*), found in some parts of Germany, has been successfully introduced into this country within the last few years. A brilliant colouring of orange-yellow or red, with black spots, gives it a very showy appearance, but its edible properties are said to be inferior to those with which we are more familiar. Attention seems to have been first drawn to Golden Tench in 1862 by Sir Stephen Lakeman; three fish presented by him to Frank Buckland, being afterwards given to Mr. Higford Burr, of Aldermaston Park, near Reading, who placed them in a suitable pond. One of these died; the other two fortunately proved to be male and female, and from them Mr. Burr raised a large progeny, some scaling as much as 4lb. This variety of Tench may now be considered thoroughly acclimatised, for they have bred freely at Woburn Abbey, also in Norfolk.

Digitized by Google

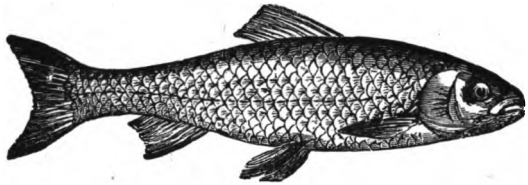


FIG. 80.—CHUB.

CHAPTER XIII.

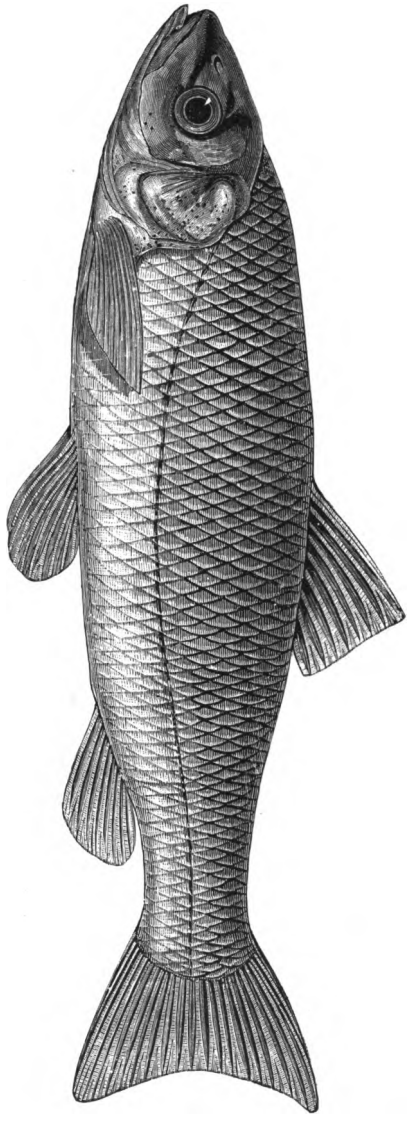
CHUB.

THE Chub (*Leuciscus cephalus*), though extremely like the Dace (*Leuciscus vulgaris*), differs from it in two or three important points, by which the tyro may at once recognise it. The ventral and anal fins of the Dace are of a yellowish colour slightly tinged with green, but those of the Chub are of a pink colour; the head also is not so pointed as that of the Dace, but is "of the Chub, chubby." This fish (Fig. 80) has several local names, such as Chevin, Loggerhead, Skelley, etc.; French, *Chevanne;* German, *Schuppfisch*, *Döbel;* Italian, *Capitone.* Badham supposes that the Avon Chub gave the immortal bard the hint for the lines—though they are really by another writer:—

> "I never saw a fool lean; the chub-faced fop
> Shines sleek with full-cramm'd fat of happiness."

Although the Chub is not much prized for the table, still it is a handsome-looking fish when in full season and fresh-caught. Being a bold-biting fish, struggling gamely, it affords the angler much amusement from July till March. It is fished either at the top of the water with large flies, insects, moths, and palmers, or at the bottom with greaves, cheese, or the pith from the backbone of a bullock. I have also taken very large Chub with the head of a lobworm, or a slug cut down the belly so as

Digitized by Google



CHUB.

Digitized by Google

Digitized by Google

to show the white inside, using them like a fly, early in the morning, the splash the bait made on entering the water appearing peculiarly attractive. Chub spawn about May, and do not thrive well in stagnant ponds, though they do in ponds fed by a running stream, provided there are weeds that give harbour for the breed of insects. They delight in still holes beneath overhanging bushes or roots, the sides of tumbling bays, etc., in rivers, but retire during the winter to deeper holes, preferring at all times a gravelly bottom. I have taken with a very large black fly (called a "Marlow Crow") Chub, in the Thames above Marlow, weighing 6½lb.; and in some parts they grow to 8lbs.; in 1874 a Chub weighing 8¼lb. was caught at Twickenham. A large Alder-fly made with a thick peacock-herl body and brown wings, and a full-sized "Coachman," which is a similar fly but with white wings, are very successful.

Dibbing for Chub with a live Cockchafer or Beetle is very successful; the horny covering of the wings should be removed. The Humble Bee and Grasshopper are also good baits for dibbing during the day, so is a large white or brown moth late in the evening. It is necessary in this style of fishing to hide as much as possible from the sight of the fish, behind a tree or bush. Use a stiffish rod, drawing off as much line as will just allow the bait to reach the water. If you are fishing through bushes, twist all the line between the point of the rod and the bait round the top; then, passing it through the bushes, untwist the line; with proper management the bait will fall naturally and gently on the surface of the water. Where there are wide leaves on the water, it is as well to drop the bait on each one in succession, allowing it to roll in from each. Chub, in the summer at midday, often lie concealed under such leaves, ready to take any insect that drops off. If you see any fish, cautiously guide the bait towards the largest. When there are no trees, bushes, or similar obstructions on the bank from which you are fishing, the winch-line should be of stout floss silk, technically termed a "blow-line;" to this add a yard or two of gut, with the hook-length attached. Stand with the wind at your back; hold the insect-bait lightly between the forefinger and thumb of the left hand, and letting out as much blow-line as may be required, let go the

Digitized by Google

hook, when the bait will be carried by the wind the requisite distance across the water. The rod for this style of fishing should not be less than twelve feet in length, and lighter than for ordinary dibbing. Observe to keep the blow-line as dry as possible, for it will be too heavy if wet.

Chub are taken during the summer with the ordinary *fly rod*, using Red, Brown, or Black Palmers, etc.; in some parts of the Thames a large black artificial caterpillar is very successful. I have also taken some very fine ones with the *spinning-bait* when fishing for Trout and Perch early in the season.

A small frog is sometimes a very successful bait, and may be used either alive or dead. If alive, it is hooked through the skin of the back by one hook of a small triangle, and if sent swimming under the overhanging bushes is almost irresistible. If a dead frog is used, it is mounted on a very small leaded gorge-hook tied on gut, and is baited with a needle the same as a Pike-bait; the hooks lie on either side of the mouth, the gut coming out at the vent, and the legs being tied to the gut at the joints. This is best worked with a light perch-rod, and, being allowed to sink, can be manipulated with the stream.

If you are fishing a small river from the bank, keep out of sight of your fish as much as possible; but if in a larger river, such as the Thames, where a punt or skiff is necessary, manage your boat so as to drift down at a fairly equal distance from the bank, and kneeling or sitting down, cast your fly or bait under overhanging bushes or any other likely-looking place for a Chub. Long casts are not often required, but care in the management of the boat and perfect quietness are absolutely necessary.

The best time to angle with bullock's pith and brains is from November till March. To prepare them for use, take the skin from the brains, washing in fresh water two or three times to clear them from blood, and until they become white. The outside skin of the pith of the backbone is very thick and tough; this must be carefully slit with scissors (so as not to tear the under-skin), and removed. When this operation is completed, slit the under-skin in like manner from end to end of the piece, and open it so as to lay it flat; there will then be skin on one side and none on the other. The skin is to bind it to the hook. Wash

Digitized by Google

clean, boil the pith and brains a minute or two, and they are ready for use—the pith on the hook, and the brains as ground-bait.

The usual method of ground-baiting with brains is by chewing and then blowing them into the water; but as many angler, object to this, they may proceed as follows: Take a quantity of brains, either bullock's or sheep's, clean them as before described, and pound them in a mortar, mixing afterwards with house-sand and a little bran. Throw into the water in small quantities occasionally whilst angling. If pith and brains cannot be procured, bait with the whitest greaves, or paste made of bread, old cheese, and honey.

A good bait during the autumn and winter is a small cake of cheese, on a medium-sized triangle hook. Fish with this as with pith, and ground-bait with very small pieces thrown in at the head of the swim.

The rod should be light, and about twelve feet long if used from the bank (but may be shorter to use from a punt), with forty or fifty yards of fine prepared plaited silk line on a suitable winch. The bottom tackle should be composed of three yards of fine gut line, a No. 5 hook, and a quill float of proportionate size to the amount of stream in the swim, using as small a one as possible. Choose a gentle swim about six feet deep, where there are willow bushes overhanging the water; plumb the depth and fish an inch from the bottom, baiting with the pith, and using the brains as ground-bait. Strike directly you see a bite, and handle your fish carefully; if a large one, it will probably rush furiously to the opposite side of the river directly it is hooked; give plenty of line, unless he is going to dangerous quarters; put on a little strain; and after his first or second effort, and a few plunges, you may venture to bring him to the landing-net.

Digitized by Google

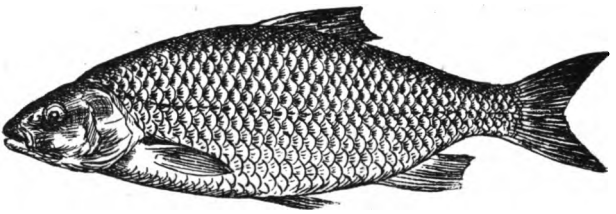


FIG. 81.—ROACH.

CHAPTER XIV.

ROACH, RUDD, AND DACE.

THE ROACH (*Leuciscus rutilus*) belongs to Order II. (*Malacopterygii Abdominales*), Family *Cyprinidæ*; French, *Rouget* or *Rosse*; German, *Die Rothauge*. Roach spawn about the end of May, depositing the ova on weeds in shallow water, and may be seen in shoals, working their way up strong rapids and waterfalls to find suitable places for the purpose. When the spawning is over they may be noticed scouring themselves on the gravelly shallows in the stream, and in October they will be found in the deeps, where they will have taken their winter quarters. In the spawning season, and just before that period, their scales are very rough, but soon recover their smoothness when the reproductive business is concluded. Pennant mentions a monster Roach which weighed 5lb., but 2lb. to 2½lb. is a very large size. They are seldom caught heavier than 2lb., though I have taken them in the Thames weighing 2½lb., and have known them to reach 3lb., but these leviathans are very scarce.

They are in good season from July till March, but the winter months are generally the best for angling for them, especially after a flood, when the water is recovering; the larger ones have then left the weeds, and remain in the deep water, and not having so much living food about them, will more readily take the bait. Their scales are then very smooth and large, of a dark bluish

Digitized by Google

green colour on the back, lightening into a bright silver nearer the belly; the under-fins are a bright red; the back fin and tail of a dusky red, tinged somewhat with purple.

The Roach is, in appearance, a handsome fish when in season, though, perhaps, one of the coarsest of the finny tribe as far as eating is concerned. It affords good sport, and requires some amount of skill to catch; although by some writers it is termed the "water sheep," and is said to be taken easily; but in reality it requires a quick eye, fine tackle, a steady hand, and much practice, before anyone can pretend to be a good Roach angler.

One great desideratum in Roach-fishing is that the angler should know something of the water that he intends to fish, and then choose a swim where he can fish with comfort, according to the state in which the water may be at the time. Roach do not approve of very rough water, but are more generally found in steady swims of a moderate depth and with a sandy or gravelly bottom. When angling in rivers, choose if possible a swim that is rather shallower at the end, especially if beyond the shallow there is a slight hole, because when the ground-bait separates, the principal portion lodges there, and consequently keeps the fish together in a better manner than it would do if the swim were not so conveniently adapted to retain it, but allowed it to be entirely washed away by the action of the stream.

It is also by the judicious use of ground-bait, and by fishing at the proper depth, that one angler will be more successful than another, who may be using the same description of bait, the same quality of tackle, and fishing at a very short distance from the first one, though not with the like success. One of the cleanest and simplest ground-baits, and at the same time one with which I have had the best sport, is made of bread and bran: the crust of a quartern loaf being cut off, soak the crumb in water till it is well saturated, squeeze it nearly dry, then, placing it in a pan or similar receptacle, add the bran by handfuls, and knead it well together until the whole is almost as stiff as clay. This requires some little time to make, but will amply repay the angler for his trouble. In rivers like the Thames, when fishing from a punt, the ground-bait should be worked into balls about the size of a moderately large turnip, and if there is much stream

Digitized by Google

will probably require some clay mixed with it to increase the weight and bind it together; or the insertion of a stone is sometimes requisite, so as to ensure its sinking instantly at the head of the swim when dropped over the side of the punt. In ponds and small rivers the ground-bait balls should be used smaller. An excellent addition to this description of ground-bait (although many object on account of the scent) is a quantity of carrion gentles; after the bread and bran are well mixed with some clay and formed into balls, press a hole in each with the finger, and before throwing the ball into the swim, fill the hole in the ground-bait with gentles and close it tightly. In eddies and still waters a handful of carrion gentles alone thrown in are very useful; but if there is much stream, it is evident that the gentles, being light, must be carried away directly they reach the water; whereas if they are worked into the ball, this sinks directly, and they then find their way out gradually and keep the fish about the swim. Potatoes are also used for ground-bait; they should be boiled till soft, and gently squeezed before being thrown into the swim. At times, when the water has been very clear, good sport has been obtained by raking the bed of the river at the head of the swim; or, if punt-fishing, by raking above the upper side of the punt, up-stream, so as to colour the water in a similar manner to that required for Gudgeon-fishing.

The rod used for Roach-fishing from the bank should be from sixteen to twenty feet in length, of light and stiff cane, sharp in the strike, and not ringed; if to be used from a punt, it should possess the same qualities, but should be from ten to eleven feet only. For a rod of this latter description it is safer to have rings, tolerably close together (so as not to allow the line to hang too loosely from the rod), as it not unfrequently happens that a Barbel makes his appearance in the swim, when, unless the angler is provided with running-tackle, he stands a very fair chance of losing his fish. The running-line should be the very finest plaited silk (prepared with waterproof dressing), and should be from thirty to forty yards long, on a small check winch; or if the angler chooses, a plain winch.

In the Lee, however, the true Roach-fisher scorns rings to his rod, and trusts to his skill alone to enable him to land safely his

Digitized by Google

finny prize. Most Lee-fishers keep an inch or two of fine silk line tied to the end of the top-joint, and fasten the gut or hair line to the silk by means of a draw-loop knot ; this is a better plan than fastening the line directly to the rod, as the latter is apt to chafe the gut or hair. The Roach-line should be of the very finest blue gut, in length about three yards, although many prefer the same length of horse-hair ; this, however, is becoming rapidly superseded by the extra-fine gut, which, besides being less than half the substance, possesses five or six times the strength.

The size of the hooks varies considerably, some experienced anglers using them as large as No. 6, whilst others never use anything larger than No. 11 ; a medium size, about No. 9, will generally be found the most useful. As regards shape, the fine wire round bend, with the point of the hook inclining inwards, in the direction of the end of the shank, is by far the best shape for hooking a fish, the reason for which will be obvious to readers of Chapter II. There are, however, many who prefer the bright sneck, a short square-shaped hook, extremely sharp, with a good barb.

The best and neatest float is the taper quill ; though, for rough work, a very thin cork is very useful. Roach floats are of all sizes, from those carrying half a dozen shots to some for use in heavy water and which require thirty shots or more. Observe to shot the line so that a very small portion only of the tip of the float is left above water, for Roach frequently bite so very fine that without attending to this you will probably miss the chance of two bites out of three ; neither should the float be larger than is actually necessary, although it must be obvious that in fishing some of the deep swims in the Thames, where there is a strong steady current, unless the angler has a tolerably large string of shot, his bait will not reach the bottom until it arrives at nearly the end of the swim ; therefore always match the size of the float as nearly as possible with the degree of the current in the river you intend to fish.

Plumbing the depth is performed in the following manner : If using a roll plummet, as it is termed (which is simply a small roll of thin sheet lead about an inch wide), unroll about two inches from the end, lay the hook in, and roll up the plummet

Digitized by Google

again ; your hook is then secured. This is not so good as using the ring plummet, the hook in this instance being passed through the ring, and the point inserted in the cork at the bottom of the plummet, which may be either taper like a sugar-loaf, or square-ended. As success with Roach depends much upon angling at the proper depth, take pains to ascertain the depth accurately before you commence fishing ; when the plummet touches the bottom, and the tip of the float is even with the surface of the water, you have obtained the true depth. It is better when angling for Roach or any other fish which require ground-bait, to allow the line to remain in the water with the plummet on the hook while you are casting in the ground-bait, so as to stretch and soften the line, and render it, consequently, less liable to break, as gut and hair will frequently do when dry and stiff. It is also a good plan to dip the line above the float occasionally in the water, for the same reason.

Having discovered the correct depth, commence fishing with the bait in such a position that it almost touches the bottom ; if without success, alter the float so as to fish somewhat shallower—that is, with the bait two or three inches from the ground ; and if still unsuccessful, vary the position of the float still more. During very warm weather Roach occasionally swim nearer the surface, and then sometimes take the bait better at midwater than at bottom ; but as that does not often occur later in the season, commence with the bait nearly touching the ground.

Roach may also during the summer months be taken with a *fly*, using it below the surface and without a float. Put on one small shot to sink the bait, drawing it gently up and down till you feel a bite : the Roach generally take it as it approaches the surface.

It often happens in rivers, from opening the locks, altering the run of water in the mills, and various other causes, that the depth of the water is changed ; therefore, if you have been enjoying good sport and it should suddenly cease (which it will probably do if you have lost the proper depth), then try the depth again.

The baits are somewhat numerous—paste, liver-gentles, worms,

Digitized by Google

creed malt, rice, etc.; of these the first two are the best. In making the paste it is absolutely necessary that the hands should be very clean, otherwise the paste will be discoloured: take a piece of the crumb of a loaf the day after it is baked, dip lightly in water, immediately squeeze it as dry as possible, and placing it in the left hand, knead it with the thumb and fingers of the right, till it becomes exceedingly smooth and stiff. This is, when well made, the best paste for Roach, and they seldom refuse it at any time of the year. Many add a small quantity of honey; in this case the bread will not require dipping in water. Some also prefer a pink paste; this is made by mixing a small quantity of vermilion or red ochre with the one first mentioned. The Caddis is also a good bait, and should the angler be fishing any water where this bait is plentiful, at the time when it is leaving its shell, he will probably find that the Roach will take nothing else, this being then their natural food. At other times a small red-worm or a portion of the tail of a small lobworm will be found successful. Note, when using these, to ground-bait with a quantity of a similar description of worms chopped up into small pieces (instead of the bread and bran which should be used when paste is the bait) in the same manner as the carrion gentles are added when liver-gentles are used on the hook; the fish, as is often the case, appearing to judge from outward appearance only, and therefore preferring the well-fed aldermanic individual moving along in grand state on the hook, to the dirty *canaille* which are swept along with the stream.

It is, however, often the case that with Roach, as with all other fish, the water may appear in good order, the wind in the right quarter, and everything else equally favourable, but the fish will not take the bait, let it be ever so tempting. The disappointed angler declares that "they are not on the feed," the simple fact being that by a natural instinct they appear to expect, at certain seasons of the year, and in certain conditions of the water, some particular natural food which is in the water, whether in the shape of decomposed weeds, grubs, Caddis, or other insects not easily to be discovered.

To fish for Roach with one gentle, the best plan is to enter

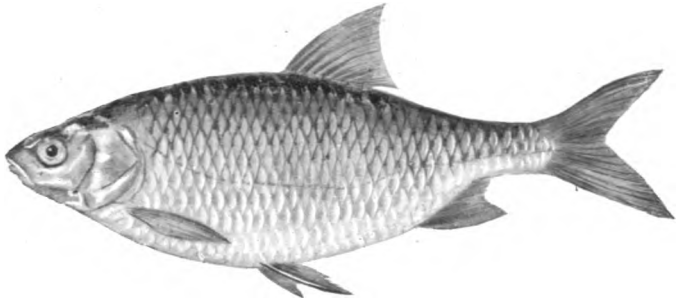
Digitized by Google

the point of the hook (which should be No. 10 or 11) near either end, and bring it out at the other, drawing the point back again sufficiently to conceal it; pursue a similar method with the first gentle, if using more than one, hooking the other through one end only. The bright red chrysalis of the gentle is a good addition, but, being somewhat tender, requires careful handling. I find the best way is to run the hook through from end to end, and let it cover the binding of the hook, hanging one or more live gentles on the hook, and letting them float wriggling down the swim; this is irresistible. A larger hook, No. 8 or 9, is required for a worm; to bait with which, enter the point of the hook near the head of the worm, which must be worked gently on to the hook with the thumb and finger of the left hand, while the right is gradually working the hook downwards; a small lively piece of the tail may be left moving about, but if too much hangs loose, the fish may nibble, but will seldom take the whole in their mouths, and the angler will be annoyed on finding part of the worm gone, but that he has missed his fish.

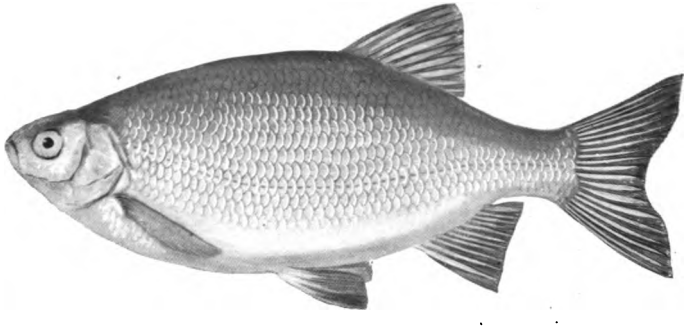
Another very good way of baiting with gentles is by means of very light leger tackle and a very small triangle on which three nice, lively, fat gentles are impaled. Then take a piece of the bread and bran ground-bait (with which a little clay has been mixed, so as to make it firmer) about the size of a small potato, and wind the gut of the hook-length round it once or twice, allowing the baited triangle to hang just clear of the ball. This requires careful handling so as to avoid breaking off the ball of ground-bait, which is the attraction. I have found it at times a most successful way of angling for Barbel, using, of course, a larger triangle and stronger tackle.

Last, but not least—for it is one of the very best baits for use in the autumn and winter—is a simple cube of bread, though care must be used by the tyro, as it is very apt to be washed off when being brought back for a fresh swim. After a little practice, however, this little difficulty can be overcome. Carefully cut off the bottom crust of a slack-baked loaf, and soak for half a day. When about to use it, remove the outer rough part on both sides. This will leave a clear slice a little over ¼in. thick, one side

Digitized by Google



ROACH.



RUDD.

These two engravings show clearly the difference in the position of the dorsal fins, and in the shape and position of the mouth, which are the chief features by which these two fish may be distinguished.

Digitized by Google

Digitized by Google

being a clear yellow, and the other an equally clear white. Cut this into nice little clean cubes, one of which, placed on a No. 9 or 10 fine wire round hook with my in-turn point, should secure the immediate attention of any really up-to-date Roach. Ground-bait with bread and bran.

Always keep the top of the rod over the float, and sufficiently high to prevent any slack line from touching the water, so as to strike lightly but quickly (the motion coming not from the arm but from the wrist) the moment you observe the least movement of the float, either by its being drawn under or thrown up a little. Do not strike too hard, for the Roach, being a tender-mouthed fish, is hooked by a very slight jerk.

When you have hooked a fish, raise the top of the rod and place a slight strain on him by lowering the butt; by playing him thus he will soon be ready for the landing-net, an article which will be found particularly useful if fishing from a high bank, or where the fish run large. When fishing from the bank with a twenty-foot rod and a tight line, it will be necessary, of course, to remove the butt and large joint to bring the fish within reach of the net.

The RUDD, *Leuciscus erythrophthalmus* (French, *Rotengle*), derives its name from its gorgeous colouring, the general tint of the body being a reddish gold; the eyes are various shades of scarlet and crimson. The Rudd can be readily distinguished from the Roach by the position of the dorsal fin; that of the Roach has the front ray almost even with the front ray of the ventral fin, whilst that of the Rudd is further back and commences evenly between the ventral and anal fins, and, as I have before said, the eyes are especially brilliant in colour. The Rudd is found generally in the waters of Great Britain as well as on the Continent, but is more particularly a pond fish, and therefore useful as stock for feeding Pike and similar fish of greater value. It is rather a bold-biting fish, and is a noted species in Norfolk, where the late Dr. Norman used to fish for them with the paternoster and three hooks, several times landing a brace weighing nearly 5lb., and once taking three at the same time, which together scaled between 5lb. and 6lb. They seldom exceed a pound in weight, and thrive best in

Digitized by Google

ponds and still waters with gravelly bottoms, spawning about April. Angle for them at the bottom the same as for Roach, with a fine gut or hair line, No. 9 or 10 hook, and a light quill float. Bait with red-worms, gentles, or paste, and ground-bait as usual.

The DACE, *Leuciscus vulgaris* (French, *Vandoise*; German, *Hasling*), is a handsome shaped fish, the body long and of a bright silvery colour; the scales and fins small, the latter being of a yellowish tinge. The largest I remember to have seen was taken in the Thames near Hampton, with a worm, and weighed exactly one pound. The River Colne is also noted for Dace of large size, a great many being taken near West Drayton.

They are sharp-biting fish, and therefore require striking quickly. During the summer months they frequent shallows, rapids, and eddies, when they afford good sport to the incipient *fly-fisher;* indeed, they are about the best fish to initiate him into the art and mystery of fly-fishing. The young angler will find capital sport during the fine summer evenings on the banks of the Thames, using the Black Gnat or Golden Palmer on the shallows about Isleworth, Twickenham, or Hampton, and fishing from the towing path. The house-fly, Red, Black, and Brown Palmers, Blue-duns, and Gnats, are all killing flies for Dace, and may be rendered still more so by the addition of a gentle on the point of the hook, or, instead of a gentle, a thin strip of light yellow kid leather wound round the hook, from the tail of the fly nearly to the barb.

In the autumn Dace retire into deeper water, and may be taken with the same rod and bottom-tackle as Roach; the same baits also may be used. In summer they prefer the gentle; in the autumn and winter, paste and worms. The best months are from July to December. Large Dace are often caught while fishing for Barbel late in the summer, with the tail of a lobworm; when this occurs, it shows that they are beginning to feed lower down and to discontinue rising at the fly. In shallows two or three feet in depth, such as lie in the angle of two streams or where a brook enters a river, or between the runs at a mill tail, where there is a kind of eddy or backwater, Dace are usually found waiting for any unlucky insects or worms that may be brought down the stream;

Digitized by Google

in such places work the bait from four to six inches from the bottom—a small red-worm will be found very killing. The ground-baits mentioned for Roach are equally good for Dace, but it must be remembered that when ground-baiting for Dace you are at the same time performing a similar office for nearly every other description of fish, and you are just as likely to take Barbel, Roach, or Trout. As an instance I might mention that early one morning I was Dace-fishing a small stream in Kent, using the gentle, and fishing very fine with running tackle; in a very short space of time I landed two brace of Trout, each fish over a pound (a large size for the stream in question), several good-sized Dace, a Perch, and some Gudgeons; the only ground-bait I used was carrion-gentles, sprinkling a few in occasionally a yard or two above the swim, which was about five feet in depth; the bottom line was the very finest gut, and the float a small taper quill carrying half a dozen small shots; this was in the month of June, the weather was extremely hot, and it was only for an hour or two early in the morning that there was a chance of doing anything.

And here I must remind the young practitioner that although with Roach, Dace, and other fish which require ground-bait, this is necessary to draw the surrounding fish into the swim, yet it must be used with judgment, not throwing in at once a sufficient quantity to satiate all the fish for half a mile down the water, but just sufficient to bring them into the swim; and as long as they continue on the feed, a very small quantity thrown in at intervals will suffice to keep the shoal together.

The best plan is to ground-bait the place overnight, if possible, with a similar description of bait to that you purpose using the following day. If you intend fishing with gentles, use the bread, bran, and carrions, mixed with a little clay; if with worms, then a couple of hundred or more worms should be chopped small and thrown in a few yards above where you intend to fish. It will also be found a good plan when fishing with worms to throw in a clay ball or two containing worms, the same as used for Barbel.

The Nottingham style of Dace-fishing is with a rather long light rod with small upright rings, a wooden winch, and a fine

Digitized by Google

undressed silk line. Instead of plumbing the depth, as most of the London anglers do, the float is adjusted to what the angler considers about the depth, and casting his tackle out to the requisite distance from the shore, he allows it to drift down stream. Should the float sail down without dragging, the depth below the float must be increased by sliding it up the line; if it bobs under at once, the float must be lowered till the worm touches slightly on the bottom without fouling. The angler thus ascertains the depth with tolerable accuracy without disturbing the water. The length of the swim often reaching twenty yards down the river, some nicety is required in running the line from the winch so as not to draw the float out of the line of ground-bait, which the stream would be almost certain to do if there was any check on the line.

Digitized by Google

FIG. 82.—LAMPERN.

CHAPTER XV.

EELS, LAMPREYS, AND LAMPERNS.

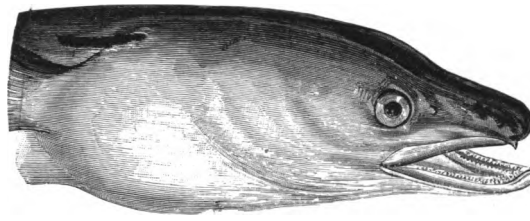
THE EEL belongs to Order IV., *Malacopterygii Apodes;* family, *Muræniдæ;* genus, *Anguilla.* It is known in other countries as: French, *Anguille;* German, *Der Aal;* Dutch, *De Paling;* and Swedish, *Al.* There are three varieties known to exist in this country—the Sharp-nosed (*Anguilla acutirostris*), the Medium-nosed (*A. mediorostris*), and the Broad-nosed species (*A. latirostris*). The Eel is found throughout Europe and in all but the very cold regions. It was amongst the fish proscribed by the Hebrews, as being without scales; but if a portion of eel-skin be dried, the scales will be clearly visible. As winter approaches, although Eels breed as well in fresh as in salt water, the larger Eels work down the rivers, apparently in search of warmer regions, or possibly the process of spawning requires a change. Pinkerton is of opinion that this migration is confined to the Sharp-nosed Eels. He remarks that at Toome, Ireland, where there is a great Eel-fishery on the Lower Bann, there are from fifty to sixty tons of Eels caught annually during this particular season. During one night in 1842, when he visited the fishery, there were about 11,000 Eels taken, and amongst these there were not more than three that were Broad-nosed Eels. The young Eels, or Elvers, run up from the sea in March or April, and many thousands may then be seen, about three or four inches in length, passing in

Digitized by Google

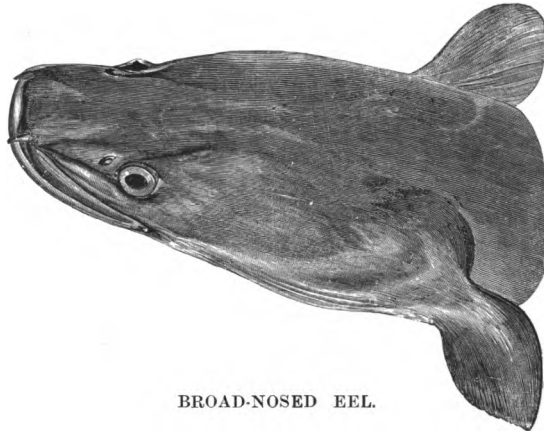
procession up the rivers. This is known in the Thames and Severn as the *Eel-fare*, and the name of *Elver* may possibly be a variation from *Eel-fare*, this being apparently derived from *fare* (Saxon), to travel. When the Eel does not go down to the sea, it deposits its spawn in the sandy bed of the river during the summer months, and this hatches out in the autumn, though the young Eels remain hidden till the ensuing spring, the adult Eels burrowing under banks or stones. With regard to the size to which they grow in this country, Yarrell refers to one that was caught at Wisbeach, which weighed 27lb., though an old copy of the *Norwich Mercury* reported the exhibition at Newmarket of a Sharp-nosed Eel which was 6ft. 1in. long and weighed 30½lb.; Lord Falmouth had an Eel weighing 20lb. dug out of a drain. Badham says that in Prussia they will sometimes attain to a length of 12ft.; in the Elbe they grow to 60lb. weight. In No. 1128 of the *Field*, it was reported that an Eel weighing 36lb. was caught near Downham Market, in November, 1867. In the Thames, and indeed in most large rivers, they are taken principally with night lines, and in Eel baskets or pottles; also in small rivers and ponds by means of an Eel-spear struck in the mud, the Eels being caught between the prongs, which are covered with small barbs so as to retain them.

Bobbing for Eels is sometimes practised; it is done in this manner:—Having ready a quantity of tough well-scoured lob-worms, fasten a needle to a couple of yards of strong red worsted; pass the needle through each worm from the head to the tail until the worsted is full. Coil them round the hand, and tie them tightly in one place with some strong string, so that none of the links hang loose. The rod should be a small pole about eight or ten feet long, tapering from about an inch or more in diameter to half an inch at the small end, to which should be fixed a strong ring bent down to a right angle with the rod. Four or five yards of whip-cord will do for the line, but a piece of strong trolling line is best. The bobbing lead is a hollow cone about three inches high, with a hole through the apex of the cone; through this the line is passed, and tied securely to the bunch of worms, upon which the lead then falls, fitting on the top like a cap. Letting out just sufficient line to allow the lead to touch the

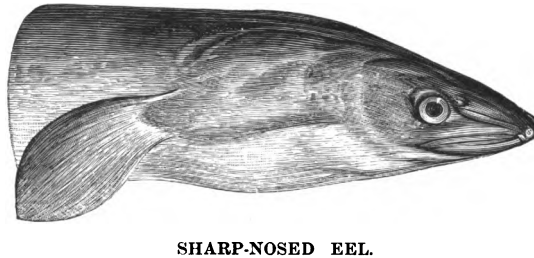
Digitized by Google



SNIG.



BROAD-NOSED EEL.



SHARP-NOSED EEL.

Digitized by Google

Digitized by Google

bottom when the top of the pole touches the water, fasten the remainder round the butt of the pole; keep raising them two or three inches from the ground, and lowering them till you feel a bite; then draw the bait steadily up, without jerking, but sufficiently quick to swing the lead into the boat before the Eel drops off. They are only taken by the teeth sticking in the worsted—two or three are often taken at once.

Night-lines are made of water-cord, with the hooks about half a yard apart, baited with worms, Loach, Gudgeons, etc.; a brick is fastened to each end of the line to sink it, or a peg at one end and a brick at the other, and laid obliquely across the stream.

Eels are also often taken when *legering* for Barbel. This style of fishing has already been mentioned, as also *float-fishing*. With the latter the bait should lie on the ground. Strike when the float goes steadily off; get the Eel on shore immediately, and cut the bottom line close to his mouth, leaving the hook in, or he will tie your line up into a mass of knots, which will not be improved by his slime. I have also taken them when *live-baiting* for Jack. I was fishing a piece of dead-water in Shepperton Weir, for some time without success, one afternoon; altering the depth so that the Gudgeon swam much deeper, there were two runs in succession, the fish that took the bait fouling the line each time by running under the sill of the weir, apparently at the moment of seizing the Gudgeon. Suspecting they were Eels, I struck next time directly the float went down, and landed a fine Eel; continuing at the same place, I had five in succession in a very short time.

When the river is low and bright, they may be taken by *sniggling*. A short stout needle is whipped tightly to the end of a few yards of trolling-line, in such a manner that the needle may hang crossways at the end of the line. Enter the needle at about one-third of the length from the head of a lively lobworm, pass the whole of the needle inside towards the tail, and draw it back towards the head of the worm, so that the middle of the needle is opposite where the point entered; by this means the worm is sound and neatly fixed. The rod for sniggling is only used to convey the worm to the hole where you expect to find an Eel, and is made thus: A piece of stout copper wire about eighteen inches long is fastened to the end of a stick seven or eight feet in

Digitized by Google

length, bending the wire into any shape you find necessary to enable you to place the worm in the hole, the end of the wire being pointed so as to hold the worm. Experience will soon enable you to distinguish those holes likely to contain Eels; their haunts may sometimes be discovered by their blowing up bubbles. If an Eel is there, he will draw the bait off the wire; give him loose line and plenty of time. On giving a moderate jerk the needle is fixed across his throat; hold the line tight, keeping a steady pull on it, and he will soon make his appearance.

The LAMPREY, *Petromyzon marinus*, is a member of Order II. —*Cyclostomata*, or Round-mouthed Fishes; the word *Petromyzon* meaning *stone-sucker*. German, *Die Lamprete*; French, *Lamproie de Mer*. It is in season from March to July, and at one time formed an important item in civic feasts. They are found generally in most of the seas and rivers of Europe and America, thriving, however, better in the warmer latitudes. The Severn is a noted river for Lampreys—Pennant referring to an ancient custom of the City of Gloucester, which consisted of an annual presentation to the sovereign of a large lamprey-pie. According to history, the decease of Henry I. was occasioned by an excessive fondness for lampreys.

The LAMPERN (Fig. 82), *Petromyzon fluviatilis* (French, *Lamproie de Rivière*; German, *Neunauge*), seldom exceeds a foot in length, and is in great demand as a bait for Cod and other sea-fish. It is well known in many of our rivers, especially in the Thames, Severn, Trent, and Dee. According to the Thames Bye-laws, it is in season from August 24th to the end of the following March, the Lamperns running up the river after the first flood; many thousands have been taken at Teddington Weir, on the Thames, and I have taken them as high up the river as Marlow. The Dutch fishermen are the principal buyers, and from £5 to £10 per thousand has been paid for them, according to the season and quantity taken. They are remarkably good when fried. They belong to the Cartilaginous Order, having no back-bone; therefore, when being cleaned for cooking, they simply require to be slit down the belly, when the gristle which takes the place of the back-bone can be drawn away like transparent cord.

Digitized by Google

FIG. 83.—GUDGEON.

CHAPTER XVI.

GUDGEON, BLEAK, LOACH, MINNOWS, ETC.

THE GUDGEON, *Cyprinus gobio* (French, *Le Goujon*; German, *Gründling*; Italian, *Gobione*), belongs to Order II.—*Malacopterygii Abdominales*, family *Cyprinidæ*, and rarely exceeds eight inches in length. Both ancient and modern writers agree as to the edible qualities of this excellent little fish, Galen giving it a high rank amongst the finny tribe for its digestibility. It spawns about May and the fry are about a month hatching out. Gudgeon are somewhat peculiar in their habits, and will at times almost disappear from some parts of the river where previously they had been very plentiful; in years gone by it was the custom on the Thames in the summer to have Gudgeon parties, the fish being fried at riverside hostelries, and a good dish of Gudgeon, properly cleaned and fried crisp, are not to be despised. Of late years the Gudgeon appear to have been diminishing greatly, not only in numbers but in size. They are gregarious bottom fish, swimming in shoals and feeding on the insects and worms in the weed or fine gravel at the bottom of the stream. Thus it is that constant raking of the gravel is necessary, with the heavy iron rake to be seen on the Thames punts, if good sport is to be expected.

A light ten-foot cane rod, rather stiff, should be used, and fine running tackle, as a Perch is very likely to visit the swim; the float should be in proportion to the stream, and when the line is shotted ought to be visible for about half an inch, or even less, above the water. Threadle a bright red worm on the hook,

Digitized by Google

which should be about a No. 9 on very fine gut, and very carefully plumb the depth so that the worm just touches the bottom. Then if the fish are on, Gudgeon-fishing is "not bad for a change." Several may be taken on the same worm. Strike directly the float goes down and do not forget to strike every time the float arrives at the end of the swim. In Jesse's *Anglers' Rambles* (1836) is a capital description of a day's Gudgeon-fishing at Hampton, then a noted station for this sport. The author says: "Few fish bite more eagerly than Gudgeons, and this perhaps is the reason why so many persons may be seen patiently sitting in punts from morning to night on the River Thames employed in catching these freshwater smelts. There appears, indeed, to be a fascination in Gudgeon-fishing which is not easy to account for, and the wonder is increased when we see three or four persons in a punt, lightly jerking a rod every instant and watching a float as it glides down the stream before them, the sun sometimes scorching them, and at others the rain wetting them through. Notwithstanding this, however, the fascination certainly exists, and it is mentioned as a fact that a clergyman of a parish in the neighbourhood of Hampton Court, who was engaged to be married to the daughter of a bishop, enjoyed his Gudgeon-fishing so much, that he arrived too late to be married, and the lady, offended at his neglect, refused to be united to one who appeared to prefer his rod to herself."

When fishing from a punt it will be unnecessary to use the rake again as long as the Gudgeon continue biting. If they cease doing so, and do not come on again after raking the ground, try a fresh swim, continual raking and change of ground being requisite to secure successful Gudgeon-fishing. I once caught a hundred Gudgeons in an hour from one swim; this was in the Thames in 1858. Being short of Jack-baits I was compelled to catch them with a rod and line; it was sharp work, the swim was about two feet deep, and the Gudgeons were well on the feed, taking the bait as soon as it reached the bottom of the water. I used the tail half of a red-worm threadled securely on the hook; by this means I could generally take a dozen before requiring a fresh bait.

The BLEAK, *Leuciscus alburnus*, is one of the *Cyprinidæ* (French,

Digitized by Google

L'Ablette; German, *Bliecke*; Welsh, *Corwyniad*). It very much resembles a Sprat and is principally useful as a spinning or live-bait for Trout, but requires very careful handling, as it is very delicate and the brilliant silvery scales rub off very easily. Bleak are pretty little fish, rising readily at midges and gnats, not objecting to a sewer outfall but frequenting it in shoals and feeding on anything animal or vegetable that may come down with the stream. In France, the silver from their scales has a commercial value in the manufacture of imitation pearls, a process introduced in Venice about two centuries ago. The fish are rubbed together in pure water to obtain the scales with their silver coating. The scales, after being rubbed into the water, are strained through a cloth and are then allowed to settle, when the water is drawn off and the silver residuum forms what is known as *essence d'orient*, from 17,000 to 18,000 Bleak being required to produce a pound of this substance. The spheres used for the best imitation pearls are produced by the glass-blower from glass which is slightly opalescent. The sphere is then lined with a thin coating of parchment glue, perfectly transparent, and, before this is quite dry, the silver powder is introduced by means of a tiny glass blowpipe. When dry the sphere is filled with wax and, if intended for stringing, is pierced with a fine hole. To produce really good imitations, some skill is required in the manufacture of the spheres, and as natural pearls are seldom perfectly regular in shape, a skilful workman will give a slight inequality of surface to the sphere by tapping it whilst still malleable, so that the imitation is so good as almost to deceive the practised eye of an expert. Fifty years or more ago, vast quantities of Bleak scales were exported from the Thames, then the *nacre* or *essence* was procured by the French manufacturers from the *Leuciscus bipustulatus* of the Seine, Loire, Rhone, and the other great rivers in France, till at length the discovery of a superior *essence* from a Roman fish stopped to a great extent the wholesale slaughter of the French Bleak. The *Argentina*, or pearl-fish of the Tiber, is somewhat like the *Atherina* or Sand Smelt, and though immense quantities are used in the pearl business, the supply of fish appears to be almost inexhaustible. The pearly material is procured, not from the scales, but from the swimming-bladder, which having been removed from the *Argentina*, the fish

Digitized by Google

is sold in the market. The swimming-bladders are placed in a jar of spirits of wine as soon as extracted, which preserves their brilliancy until required for use, when the pearl-worker macerates a sufficient quantity in a solution of isinglass until he has the requisite supply of the pearly liquid.

Bleak are found in immense numbers in the Thames, Lee, and several other rivers; they are easily taken with a small fly at the top of the water, or with a gentle or paste at midwater, or towards the bottom. The Roach-fisher is often annoyed by a small shoal of Bleak making their way into his swim, attracted by the ground-bait. The young *fly-fisher*, when whipping for Dace with a very small Red Palmer or Black Gnat, on the shallows, may take any quantity during the warm summer evenings. If angling for them, it is a good plan to have four or five No. 12 hooks, tied on very fine gut about five inches in length, and attach them to an ordinary Roach line, like a paternoster, so as to fish all depths at once, using a very small quill float and baiting each hook with a single gentle or very small piece of paste. I have known them caught five at a time.

The LOACH, *Cyprinus cobitis* (French, *Loch Franche*; German, *Schmerlein*; Italian, *Barbatello*), is common to many rivers and brooks, but from its sliminess is somewhat difficult to handle. It spawns about April, and has a wonderful power of reproduction. In appearance and colour it is somewhat like a Gudgeon, its special characteristic being the barbules about the mouth; these vary in number from six to ten. Like Eels and other low-swimming fish, Loach are very restless during rough weather, and Badham considers that owing to this peculiarity, their English name is derived from the French verb *locher*, to fidget. They lie at the bottom, like Barbel, routing the gravel, and may be taken occasionally with a piece of red-worm, on the shallows near mill-tails. They are only useful as bait.

The MINNOW or PENK, *Cyprinus* or *Leuciscus phoxinus* (French, *Veron*; German, *Die Elritze*; Danish, *Elritse*), is exclusively a river-fish, swimming in large shoals, having a choice for streams with sandy bottoms, and feeding on water-weeds, worms, larvæ, etc. It is a capital bait for Perch, Trout, Chub, and Jack; it spawns about June, and the ova hatch out within a week, the young fry

Digitized by Google

growing very rapidly; the eggs are very small, and will be found adhering to each other in masses amongst the stones on the bottom of the river. Buckland relates that William of Wykeham, the founder of Winchester College, was accustomed to have Minnows served at his table—possibly serving the purpose of "Whitebait." At a banquet given by the Bishop to the King and Queen, Sept. 16, 1394, 210 guests were invited, and the expenses amounted to about £385 of our present money. Many kinds of fish were served, and *inter alia* no less than seven gallons of Minnows, which cost eleven shillings and eightpence.

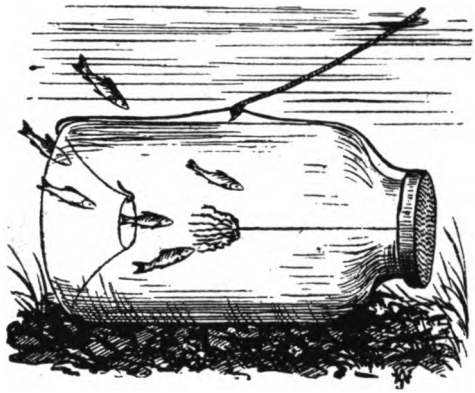


FIG. 84.—MINNOW-TRAP.

A capital method of capturing Minnows is by means of a Minnow-trap. This consists of a very clear glass bottle, over the mouth of which is fixed a piece of perforated zinc (Fig. 84); through this the stream runs, and agitates a small bunch of scarlet worsted hanging inside, attracting the Minnows, which collect about the other end of the bottle and work their way into the interior through a small opening in the centre of the bottom of the bottle; being apparently of an inquiring turn of mind, you will in a very short time have two or three dozen in the trap. When required, remove the zinc-cap, take out the minnows, refix the cap, and it is again ready for use.

Digitized by Google

The STICKLEBACK belongs to Order I.—*Acanthopterygii*, Genus *Gasterosteus*. There are many varieties, the illustration (Fig. 85) being *G. semi-armatus* (or half-armed, referring to the scarcity of defensive plates along the body next the tail, one special characteristic of this family being that the body is generally without scales but has plates at the sides). This fish abounds all over Europe, and is especially abundant in Italy. Its names vary considerably, but all point more or less to its protecting spines —Italian, *Spinarola*, *Scardapesce*, and *Scardofisso*; German, *Stichling*; Dutch, *Steckelbaar*; French, *l'Epinoche*. Though so diminutive in size, they are extremely pugnacious, especially during the spawning season, when their colours are most brilliant; the males can usually be distinguished from the females by the pink tint of the belly. They feed on grubs and insects of all

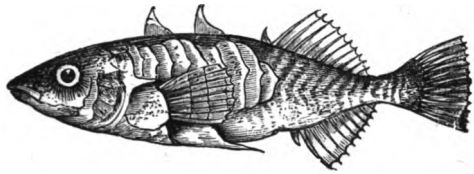


FIG. 85.—STICKLEBACK.

sorts, being remarkable for their great voracity. When the spawning season arrives, some varieties build nests at the bottom of the stream, whilst others select the leaves, stems, or roots of aquatic plants, carefully building their nest and protecting it afterwards. The Stickleback displays as much ingenuity as any bird in this nest-making, carrying in its mouth small pieces of plants for the purpose, often for some considerable distance; it will collect these into one spot, together with particles of sand, and allowing them to settle, will attach them firmly together with a species of glutinous secretion. It will press them into a compact mass by a peculiar movement of the body, working it with the pectoral fins so as to ascertain if it has acquired a proper consistency. A friend of ours, who has devoted some time to the study of their habits, saw during the breeding season in May one

Digitized by Google

of these pugnacious little fish guarding a circle some few inches in diameter, and chasing away every fish which came within its domains. On a close examination, he saw at the bottom of the water a small circular place some two inches across made of fibres, but arranged level with the bottom of the stream. Recognising it as a nest, he very carefully raised it, and found that it contained two sets of ova, about the size of a pin's head. He at once replaced it as carefully as possible, but the fresh arrangement was anything but agreeable to the paternal Stickleback, who at once set to work to adjust it to his own satisfaction. He re-arranged the larger fibres, and brought smaller pieces, which he thrust into the mass; some of the ova protruding, he dragged them away and devoured them. Then more fibres were brought and arranged over the others, working his body over the bulk with all his strength so as to smooth it down. When he was, at last, satisfied with the arrangement, he mounted guard over the nest, rushing at any other fish which came near. These peculiar little nests may be found in numbers, each protected by its own guardian, who is always ready for a battle with any intruder. They will swim round and round each other with great rapidity, biting and endeavouring to pierce each other with their spines, which are then projected to their full extent, and which they can use with such fatal effect as absolutely to rip open an opponent and cause his death, unless he is able to escape by flight from the fury of the conqueror, whose vindictive malice can hardly be conceived, as he chases his rival away from his dominions. When the young fry are hatched out, the male parent takes the greatest interest in their movements, guarding them from danger with an evident amount of affection. Sticklebacks are interesting subjects for an aquarium, though if a Minnow be introduced into their society, there is little peace till they have devoured him. As a bait they are practically valueless, unless it is impossible to procure Minnows, when they may be used for want of the proper article.

The BULL-HEAD, *Cottus gobio* (French, *Chabot commune*; German, *Der Kaulkopf*), inhabits most of the rivers of Europe, especially those running over sand and gravel. It is remarkably voracious, feeding on larvæ, worms, small fry, and the ova of

Digitized by Google

other fish. It seldom exceeds four or five inches in length, and spawns about April or May. The favourite resting-place of the Bull-head is amongst loose stones, under which it thrusts its peculiarly flattened head. Petrus Andreas Matthiolus, mentioned by Walton, was an eminent physician of Siena in the sixteenth century, who highly commended the Bull-head for its taste and nourishment; and Salter says of it that "he has known seven dozen taken in a day in the New River near Ware," and that "it is fine eating when fried, if the head is cut off;" but unfortunately the fish itself is nearly all head, so that the edible part would be remarkably small.

Digitized by Google

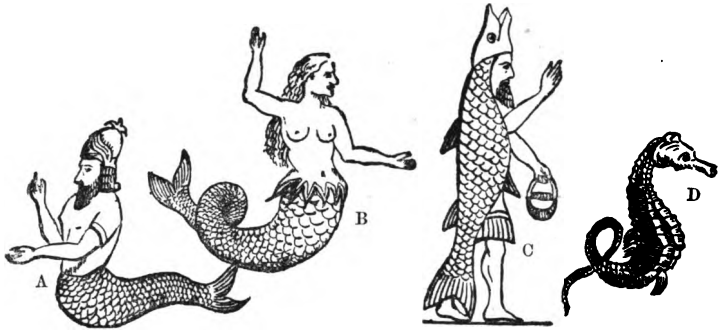


FIG. 86.—SOME MYTHICAL AND REAL SEA CREATURES.

CHAPTER XVII.

SEA-FISHING.

UNDER this head I propose to include a description, not only of the old-fashioned hand-lines, with their several styles of rigging, but also of the modern art of rod-fishing, with the tackle most adapted for the different species of fish found round our coasts. There are possibly a very great many who have never thought about or appreciated the immense value of the harvest of the sea, regarded from a professional point of view. The average annual return for the cargoes of sea-fish landed in the United Kingdom is no less than £7,000,000, which does not represent the sum actually paid by the public for the fish, but the estimate of the value when landed; so that there is ample scope for the angler to exercise his skill with the rod, in place of the ordinary hand-line, inasmuch as, if unable to fish from a boat, and thus be in a position to visit the best fishing-grounds, he can still find plenty of piers or rocks from which to angle with rod and line.

For the benefit of those, however, who prefer the boat, it may perhaps hardly be necessary to point out, that if an intimate

Digitized by Google

knowledge of the comparatively confined waters of a river is requisite to know the best swims for Barbel or other fish, how much more is it absolutely essential that the sea-angler should know where to cast anchor when out on the briny. The ground frequented at different seasons by various species of fish is known to the local fishermen by particular marks, and some specially good spots are kept profoundly secret by the fortunate discoverers. The marks are found by noting the positions on shore of certain conspicuous objects, such as buildings, trees, or high rocks, and the boat can be anchored in the proper position by the assistance of two imaginary lines drawn from certain objects on shore, the boat being the spot at which these lines cross; two or more of these objects on shore forming the line from one direction, and two or more from another direction, the position should be easily determined, especially if the objects are sufficiently conspicuous as to make the lines form a right angle. When going to a fresh locality, it is always best to select a boatman on whom you can rely; if you have any friends living in the neighbourhood, they may probably be able to recommend you a man who understands his work, not one of those sea-side loafers who will pretend to know all about it, and after inducing you to place yourself under his guidance, will fleece you in every possible manner. After taking you out for the greater portion of the day, of course not forgetting to offer up many libations in honour of Neptune from your whisky-flask or the beer-jar, as the case may be, he will bring you back with no fish, telling you that the tide was wrong, or something else not quite right; while the simple reason is that your man, on whom you relied, knows nothing whatever about the marks or the places. In river-fishing, an angler of ordinary intelligence will generally be able to find out for himself the proper places for the various descriptions of fish; but in sea-fishing, unless you moor your boat in line with these marks, you may often fish in vain, therefore it is necessary that you should be able to rely on your boatman for taking you to the right anchorage.

One of my friends has been very successful, taking fish when the surrounding boats were catching nothing. The secret

Digitized by Google

of his success appeared to be, that after anchoring his boat in the proper place, he sunk, unperceived, an ordinary large-sized galvanized wire eel-trap, the same as is used in rivers and lakes. This was well baited with entrails of fowls, etc., which acted as an attractive ground-bait. He not only caught quantities of fish with the rod, but found several fine Eels in the trap when it was hauled up.

There is one charm about sea-fishing, and that is, the infinite variety of colour, shape, and size of the fish brought to the surface. It is true that in the present day, the good old mermaids and mermen of the ancients are not to be seen except as supporters of the well-known coat-of-arms of the Worshipful Company of Fishmongers, and the Sea-serpent has gone the way of many similar good old legends, but there is still as curious a variety of forms in the denizens of the sea as there ever was.

The Kraken, or Sea-Serpent, has been honoured with a very widespread belief. From the time of a manuscript attributed to the Norwegian King Sverre, seven centuries since, the belief in its existence has been fostered by a somewhat lively imagination and the occasional presence on the surface of the ocean of gigantic specimens of the Octopus. Eric Pontoppidan, in his *Natural History of Norway*, A.D. 1751, relating what he had heard from the fishermen, said that this monster was usually found on the Cod-grounds, and that when it appeared on the surface, its circumference appeared to be about a mile and a half, whilst the many arms which surrounded it and which possibly at other times have been the only parts seen, occasionally stood up out of the water as high as the mast of a ship. If *one* of these long arms were seen working alone above the surface, it might possibly be mistaken for a huge serpent. The Octopus, Calamary, and Sepia, or Cuttle-fish, resemble each other very much. Aristotle mentions the existence of enormous Cuttle-fish in his time, and Pliny refers to one, the body which weighed 700lb. About twenty years ago a monster Calamary was stranded on the south coast of Newfoundland; this measured 80ft. in length. The Kraken is thus evidently a gigantic specimen of the cephalopod, possibly amongst the largest and strongest inhabitants of the ocean. Other fish have, however, contested the point to be considered the Sea-Serpent. In

Digitized by Google

1849 a so-called "Sea-Serpent" was exhibited in Regent Street, having been caught off Cullercoats in March of that year, and a sketch of it was given in the *Illustrated News* of the following June 2nd. It was a very fine specimen of the *Regalecus banksii*, or Ribbon Fish, length 12½ft., greatest thickness 3½in., and greatest depth 11½in.; when caught, the whole of the body was as shining as the most brilliantly polished silver. These fish appear to live and thrive only in the deepest parts of the sea; it is but very rarely that any of them come to shore, and then only after a succession of stormy weather has driven them up. Rondeletius related a story of a fish taken in 1531 in Polonia, which he said resembled a bishop, and which was brought to the king, who ordered it to be returned to the water. Stowe, not to be behindhand in the marvel business, described a sea-monster caught off the coast of Suffolk in the reign of Henry II., which was of the exact shape of a man, and was kept for six months at Orford Castle, being fed on raw fish and meat; he ultimately managed to get back to the sea, and escaped.

To arrive at a proper idea of how the belief in the existence of such creatures arose, we must go back to a very early period. Dagon, the great fish-god of the Philistines and Babylonians, derived his name from "Dag," Hebrew, male fish, and "Oan," one of the names of Noah, who, having escaped the waters of the Flood by floating in the ark on the waters, was afterwards worshipped as the God of the Flood, and, being half fish, lived in the waters. Bas-reliefs from Nimroud and elsewhere show many examples of a form half man and half fish. In our illustrations, A shows a representation of Oan; this is from Khorsabad. C is a further development of this idea, appearing as Dagon, from an antique gem. B represents Atergatis or Derceto, according to Wilkinson, a Syrian or Assyrian goddess; this figure is from a Phœnician coin, and doubtless from this and similar drawings the mermaid myth had its origin. In India, also, the legend of Vishnu is mixed up with the history of Noah, the former name being the Sanscrit *Ishnuh*, "the man Noah." Thus we see that a belief in creatures half human and half fish had its origin in ancient mythology, helped by sculptures and pictures designed to represent certain attributes of various deities, the meanings of

Digitized by Google

which were afterwards forgotten; and thus subsequent generations mistook emblematical figures for actual portraits of existing beings, who might, at any moment, present themselves to the view of the sailor, in a visible and tangible form. Modern authorities, however, are rather more sceptical than the ancients, and though there may be many animals and fish in the various seas with which we are still unacquainted, yet the form and habits of the *Phocidæ*, or Earless Seals, offer a sufficient exemplification of almost every incident described of the actions of mermaids in the water. They have been observed poised upright in the sea, then diving and rising again, looking exactly like boys swimming, for whom they have been mistaken till the ship has arrived within a sufficient distance to dispel the illusion. The *Manatee*, of Brazil and the West Indies, and the *Dugong*, of Africa, the Bornean Archipelago and Australia, might well be mistaken for semi-human creatures. Sir Humphrey Davy well said—"I am too much of the school of Izaak Walton to talk of impossibility. It doubtless might please God to make a mermaid, but I don't believe God ever did make one." The *Hippocampus brevirostris*, of which I give an illustration (D), is well known in many aquaria; the head has a wonderfully good resemblance to that of a horse, and the long prehensile tail twists about in the water ready to coil round drifting sea-plants or pieces of floating wood. The *Hippocampus*, or Sea-horse, has the curious power of moving either of its eyes independently of the other, but is, after all, very small, not growing, as a rule, to much over 5in. or 6in. in length. They are imported to this country from the Mediterranean.

There are many anecdotes extant as to the predilections of fish for glittering articles which may have been thrown or have fallen into the sea. In 1861 the Allan ss. *Anglo-Saxon* was wrecked off Chance Bay, Newfoundland, amongst the passengers being a lady wearing a peculiar signet ring with a monogram; a few years afterwards the ring was found inside a cod, caught by a fisherman in Trinity Bay, who took it to the Colonial Secretary's office in St. John's, and it was eventually restored to the representative of the family. The French newspapers of 1873 announced that, at one of the restaurants, a valuable diamond ring

Digitized by Google

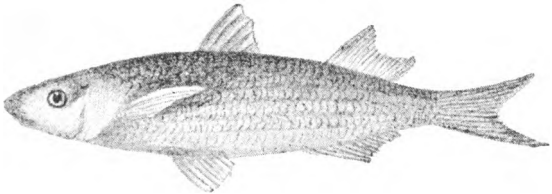
had been discovered inside a Salmon, bought at the Central Market. Going back to ancient history, Herodotus informs us that Polycrates, who was the ruler of the Isle of Samos in the sixth century B.C., made a league of friendship with Amasis, then King of Egypt, who was much troubled at the constant success of Polycrates, believing that eventually his fall would be great. Amasis recommended him to part with that treasure which he valued most, so as to make a propitiatory offering of it. Having, therefore, a splendid and most valuable emerald set in a massive gold ring, Polycrates threw it into the sea from the deck of one of his vessels. However, some five or six days later, a fisherwoman caught a fish so large and so beautiful in colour that she brought it to the palace as a present to Polycrates,

FIG. 87.—THE "FISHERMAN'S RING."

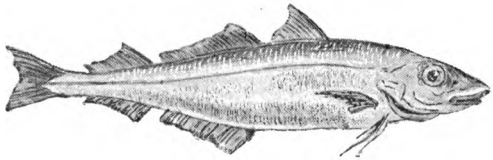
and on cutting open the fish he found the ring which he had thrown into the sea. That which is known in more modern times as the "Fisherman's Ring" is one worn by the Roman Pontiff, with which documents of minor importance are stamped; its origin is not very clear, but as it is engraved with the figure of St. Peter holding a net, in an ancient fishing boat (Fig. 87), it more probably derives its name from that circumstance than from its ever having been the property of the Apostle. On the decease of a Pontiff, his name is erased from the ring. An Arabian tradition tells us that Solomon was the owner of a ring containing a miraculous amulet, which was stolen from him and thrown into the sea. By losing this magic ring he also lost his wisdom, and therefore abstained from occupying the judicial

Digitized by Google

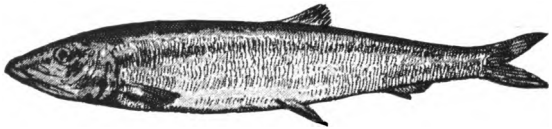
Digitized by Google



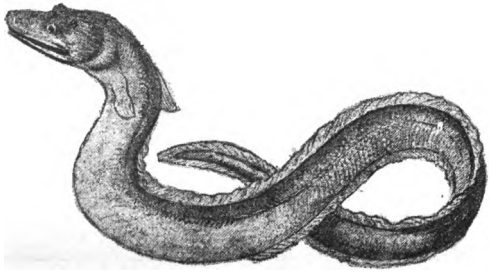
GREY MULLET.



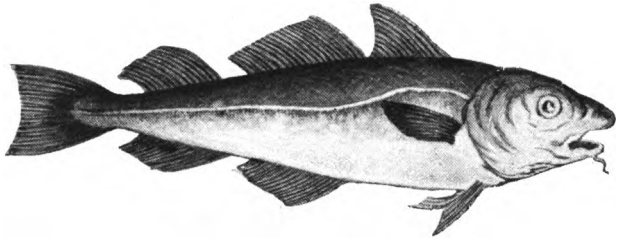
WHITING.



HERRING.



CONGER EEL.



COD

Digitized by Google

bench for forty days; when, on opening a fish which was served up at the royal table, he discovered the missing ring and recovered his marvellous wisdom. According to the ancients, a pale sapphire, on which was engraved a figure, half fish and half woman, holding a mirror in one hand and a branch in the other, the stone being duly set in a plain gold ring, was most efficacious in enabling the owner to fulfil any of his desires.

The CONGER, *Anguilla Conger* (French, *Congre*; German, *Seeal*; Italian, *Grongo*), was in high repute amongst the ancients. Those most esteemed came from Sicily, and the Greeks were very high in their praise of the Conger; in this they were followed by our ancestors, who in the Elizabethan time, considered it a royal dish, Shakespeare making Falstaff give, as one reason for the Prince's affection for Poins, that "he eats Conger and fennel." The head of the Conger was considered the best part. In Spain the flesh is not only eaten fresh, but dried and ground into flour, for the purpose of thickening soups. Congers are taken off Cornwall, Devon, Jersey and Guernsey, etc.; they are very voracious, and will eat almost anything. The best time for them is from March to October; they carry an enormous quantity of ova, which are remarkably small in comparison to the size of the fish. A Conger which died in 1880, at the Southport Aquarium, measured 6ft. 5in. in length, and weighed 90lb.: this was the size to which it had grown in five and a half years, from about 3lb. weight, when it was first placed in the Aquarium. The largest Conger caught off Mevagissey scaled 112lb., two others taken the same night being 70lb. and 60lb. They are usually caught on long lines, the hooks being baited with pieces of cuttle-fish, etc. Their habits being nocturnal, they rarely feed in the daytime except in deep water, but roam about at night. Boat-shape leads are used, weighing from 3lb. to 10lb. in weight, and strong brass swivels on the line, the hooks also being large, and made with a strong swivel at the end of the shank. The line must be necessarily strong, as the power of the Conger is very great, and, like the fresh-water Eel, it has the habit, when being landed or hauled into the boat, of twisting in all directions, so that unless you have plenty of swivels, everything will be twisted and fouled. Large quantities of Congers are taken on "bolters," or long lines with

Digitized by Google

200 or more hooks on them, and a large swivel at every dozen fathoms of line.

The MURÆNA is another member of the Eel family, very rarely caught off our coast, but common in the Mediterranean, about 3ft. in length being a fine size; Strabo records a specimen which weighed 30lb. It much resembles the Eel, though the skin shows no scales, the body is of a dark colour marked with yellow rings, with chocolate centres and outer markings of a similar colour; it has no pectoral fins. Though a small fish, it is extremely pugnacious, and according to Pliny, the Romans used to rear, tame, and teach them to feed from their hands. Vedius Pollio, who was a noted Murænaculturist amongst the Roman aristocracy, and a favourite of Augustus, was accustomed to throw offending slaves into his Muræna ponds, to be devoured by these voracious fish, Dr. Holland remarking on this,—"Not that there were not wilde beastes ynow upon lande for this feate, but because he took pleasure to behold a man torn and plucket in pieces all at once, which pleasant sight he could not see upon any other beastes upon lande."

Seeing, then, that the popular taste in Rome was so specially directed to fish and fish-culture, we cannot wonder at the high prices which were paid for some particular species, when it was the practice, as at the present day at a sale of curiosities, for the agents of wealthy epicures to bid against each other when laying in supplies for the gorgeous entertainments of ancient Rome. It was not unusual to pay about six pounds sterling per pound of fish; but there were Mullet of historic celebrity which, as Badham remarks, "fetched the seemingly incredible sums of £48, £64, and £240!" The same authority says that "one favourite fish, the Sturgeon, was paraded with much pomp in triumphal procession through the streets, moving to the sound of military music, with a crown on his head." At a later period the *Perca Labrax*, or Sea Basse, displaced the Sturgeon in public esteem, but only those which were caught in fresh water fetched fancy prices, those of the Tiber being especially famous. Turbot, Muræna or Eels, and Perch afterwards came into fashion, though the special feature of the Mullet banquets appears to have been the practice of handing round the fish alive and swimming, in

Digitized by Google

large glass bowls of water, that their varied colours when dying might be admired, before they were passed to the cooks, to appear again in a short time on the festive board to further gratify the assembled guests. The Conger was preferred by the Greeks, who had a great partiality for the head, but the Romans appear to have been contented with the fresh-water Eel, which, worshipped as a god in Egypt, and holding but a little lower standard in Greece and Rome, was, later on, designated by the Italians the "*pesci nobili.*"

One of the most curious shaped fish is the SEA-ANGLER, or FISHING-FROG (*Lophius piscatorius*); it has an enormous mouth and a most wonderful arrangement with which to attract other

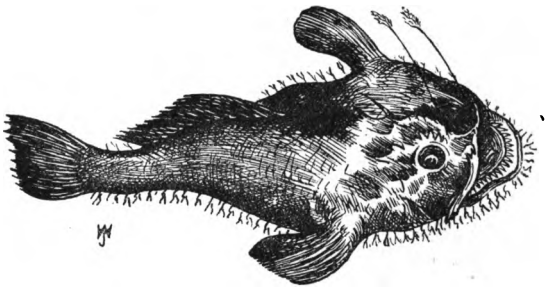


FIG. 88.—SEA-ANGLER, OR FISHING-FROG.

fish, in the shape of a couple of long movable spines connected with the top of the head. The *Lophius* lies flat on the sand, in which it is almost hidden, and the spines, moving about in the water, display sundry fibres at their ends, which much resemble small bunches of worms. The small fish, attracted thereby, are easily sucked into the capacious mouth beneath. A sketch of this monstrosity is given in Fig. 88.

The BASSE, or BASS (*Perca Labrax*) belongs to the Perch family, but when its prickly dorsal fin is not erect, it is very like a Salmon, the back being bluish, whilst the belly and sides are silvery. Basse vary very much in size, the average being about 3lb. in weight, though occasionally they are caught weighing

Digitized by Google

15lb. or 16lb. They abound on our south and south-west coasts, and are easily affected by variations of weather, appearing near the shore earlier in warm seasons, though about June is the usual time, and leaving about October. Near old wrecks, piles, or piers, are favourite places for Basse; but when a breeze comes in from the sea, disturbing and scattering from the rocks the thousands of marine insects on which Basse feed, then is the time for the Basse angler, for the fish come on at once, knowing that their food is to be easily found. By watching the seagulls, which are as eagerly ravenous as the Basse for the small fish washed out by the waves, the position of a shoal can be fairly well ascertained. When they are feeding near the surface, fly-fishing is by far the most sportsmanlike method of angling. A fairly stiff grilse rod about 16ft. in length will be the most useful size, with snake upright rings, and having a short spare top so as to be able to cast a spinning bait. The ordinary Salmon winch and line can be used, but the line should be well washed in fresh water and thoroughly dried after use. The casting line should be 3 yards in length, of strong Salmon gut, and any bright, showy Salmon flies may be used for Basse; the White-winged Alexandra, the Shaldon Shiner, the Goldfinch, and similar flies with bright bodies are very good patterns. Basse are also very partial to live Sand-eels or Smelts; these can be used either on a strong leger of the same make as is used for Barbel, but with a proportionately heavy lead, or with a Salmon gut line and a Pike float, putting on a bullet as a sinker; allow the tide to carry the float to where the fish are feeding, and for this purpose a wood winch running freely will be found most suitable. Paternostering is much practised from pier-heads and similar projections into the sea, and rag-worms, small slices of silvery fish, etc., are successfully used. A Sand-eel mounted on a Bedford spinner, and trailed or spun from a boat, is sometimes a very taking method, and artificial baits for Basse, such as india-rubber Sand-eels with the spinning attachment at the head, bright Devon-baits, clippers, comets, etc., are all excellent in their way, any bright object in motion being attractive to these rapacious fish, though on the other hand the boat must be managed with care so as not to alarm them, for though rapacious in feeding, they are easily

Digitized by Google

scared. One of the latest patterns of artificial baits is the Patent "Flexible Phantom" (Fig. 89). It is extremely durable, and being made of woven wire, is practically indestructible. The side triangles are attached to the bait by short spears projecting at right angles, thus holding them securely to the bait whilst spinning, but allowing them to fly loose when a fish is hooked. By varying the position of the spears as in the sketch, the bait may be curved to any extent, and will then spin with a gyratory "wobble" which is by some anglers considered an advantage in a spinning-bait. The "Flexible Phantom" is made in various

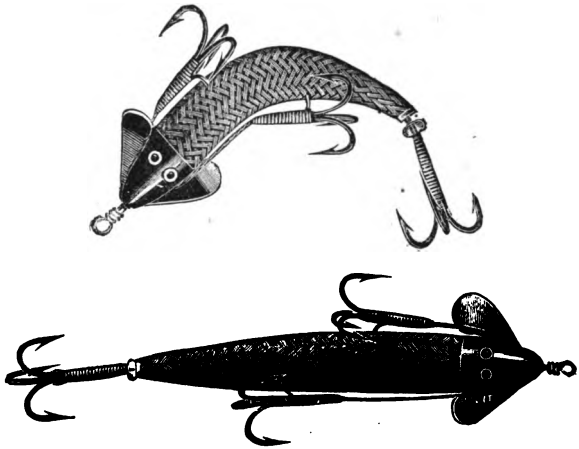


FIG. 89.—PATENT "FLEXIBLE PHANTOM."

sizes, and will be found to be a very successful bait for Trout, Pike, and Perch, or as a sea-bait for Basse, Mackerel, etc.

Amongst the Latin poets the Basse was designated *Lupus*, or Sea-wolf, and it was in great repute with the Romans; but though born at sea, those which had emigrated to fresh water fetched the highest prices. Oppian and Ælian both refer to the greediness of the Basse, and relate that when it meets with a shoal of Prawns, it will, at one gulp, fill its mouth with these nimble and prickly crustaceans, whose sharp serrated spines run into its palate and fauces, and the victim, being unable to get rid

Digitized by Google

of these fearful enemies, is eventually choked. Rondelet considered that the liver of the Basse was better than that of a goose or turkey; Heliogabalus ate the brains and milt; the dried roe is still held in high esteem as a substitute for caviare. The Basse has *two* fins on the back similar to those of the river Perch.

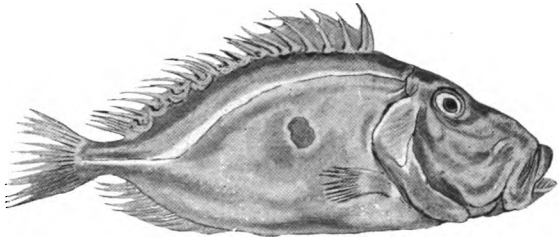
POLLACK, or LYTHE (*Merlangus pollachius*), are found in great numbers all round the British Coast. Their colour is a brown olive on the back, shading down into a creamy white on the belly; average weight about 3lb. or 4lb., but occasionally taken up to 15lb. or 16lb. As a rule the spring fishing from March to June is the best on the south-west coasts, and the best fishing grounds are where there are plenty of rocks and seaweed; among these Pollack hide, feeding near the bottom during the day, and about mid-water in the evening, rising occasionally to a white fly. They may be fished for in the same manner as, and with similar tackle to that used for, Basse. The local fishermen use, as a rule, the ordinary hand-line with the chop-sticks, so well known at all sea-side resorts, and which appears to be their one idea of tackle for almost every description of fish.

The BONITO (*Scomber pelamis*) is very abundant in the Mediterranean and Atlantic. The best time for fishing is in the summer and autumn. They are caught whilst trailing for Mackerel and are very partial to Flying-fish, an artificial one of wood, with a pair of wing-fins made of bristles, being much used for them.

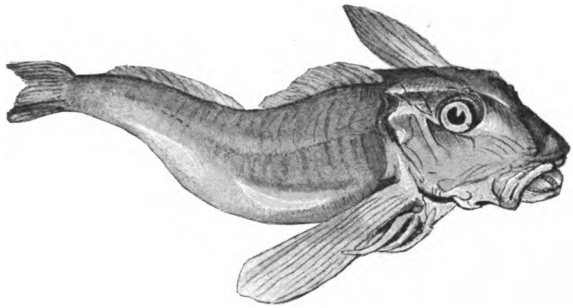
COALFISH, or SAITHE (*Merlangus carbonarius*), are extremely similar in appearance to Pollack, but are rounder, and the back is a dark bluish green. Their habits are very similar and the same tackle can be used. A bright Devon-bait with a scarlet back is capital for either Pollack or Coalfish; but as both these fish keep towards the bottom, the trace must be proportionately weighted to keep the bait deep enough in the water. Directly the bait is taken, however, keep the line as taut as possible, for if either a Pollack or a Coalfish has too much line, down he rushes amongst the rocks and away goes the gut against their sharp edges.

MACKEREL (*Scomber scomber*) are found principally round our southern coasts, and afford capital sport with the fly in the summer. Two or three flies can be used on a cast, which should be of medium-sized Salmon gut. Any bright, gaudy flies may be

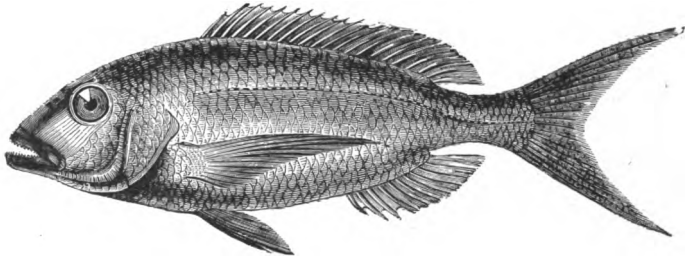
Digitized by Google



JOHN DORY.



GURNARD.



SEA BREAM.

Digitized by Google

Digitized by Google

used, the white "cuddy" fly used for Pollack, with a white body, ribbed with silver, and a scarlet tag, is generally successful. The stretcher on the fly-cast may be varied by using on a medium-sized hook a strip of Mackerel skin, cut slanting from the fish, so that half may be silver and the rest blue, from the side. When the fish cease rising at the fly, the angler can let out some 30 or 40 yards of line, and adding a lead sinker, can trail the cast after the boat until another shoal of Mackerel is discovered. Any bright artificial bait is useful if not too large. If fishing from a sailing-boat which may be going at too great a pace for rod-fishing, a hand-line with leads up to 5lb. or more in weight may be necessary; the trace, swivels, etc., must be strong enough to tow a fairly large fish after the boat when hooked, and land it. When trailing behind a sailing-boat it is termed "railing," but when from a rowing-boat, it is known as "whiffing."

Although at the present time the prices of some of our best-known fish vary considerably according to supply and demand, there does not occur such a marvellous variation in any one of them as happened at the beginning of the century. According to Yarrell, the price of Mackerel in the Billingsgate Market in May, 1807, when the fish was extraordinarily scarce, was forty guineas for every hundred of the first cargo, making the price per fish *seven shillings!* The next supply brought the market down to *two shillings* per fish; but the following year the former deficiencies of supply were more than made up, and there being then no fear that Mackerel would become as extinct as the Dodo, prices went down to the other extreme, the market was glutted, and Mackerel were hawked about the streets of Dover at sixty for a shilling, or "five a penny"; whilst the shoals off the coast at Brighton were so immense, that on one night it became quite impossible to land the multitudes of fish taken, and the nets broke away and sank with the fish.

WHITING (*Gadus merlangus*), ROCK WHITING, and WHITING-POUT are well known all round the south coast. The large fish are, as a rule, nearly always caught in deep water in the summer and autumn, using a paternoster with a lead heavy enough to keep at the bottom, and baiting with Mussels, pieces of Herring, lug-worms, etc. The local fishermen use hand-lines with chopsticks,

Digitized by Google

but with these the hooks should be on strong gut, and not on the coarse string affected by the locals, some of whom appear to be gradually awakening to the fact that the finer the tackle compatible with strength, so much the better will be the take.

Wrasse (*Labrus variegatus*) are very beautiful but worthless fish, and are generally taken on the paternoster when fishing for Whiting; there are several varieties, some spotted, others with handsome tiger stripes, but all equally useless.

Cod (*Gadus barbatus*) and Codlings are usually taken on hand-lines, heavily weighted according to the tide, and the baits are Sprats, Sand-eels, small Herrings, or Pilchards. Occasionally a fish of 18lb. or 20lb. may be taken from a pier, but the general haul will be Codlings up to some 3lb. or 4lb. in weight, and for these a twisted gut paternoster is as good a tackle as can be used. October and November are the best months.

Sea Bream (*Sparus centrodontus*) are large-scaled fish, but, like the fresh-water Bream, useless as an edible fish. They are fairly numerous off the south coast, and are generally taken on hand-lines, as the deeper the water the better. Young Bream, or Chads, are taken on a paternoster in large numbers off the Devonshire coast in the summer. Limpets, Mussels, and rag-worms are all good baits.

Grey Mullet (*Mugil capito*) are most capricious in taking the bait. A strong gut paternoster with three, four, or five hooks may be used, according to the depth of water, but, Mullet having small mouths, the size of the hooks must be in proportion; a Shrimp, or small worm, very carefully threadled on the hook, is a good bait. In fine weather Mullet may be seen basking on the surface in shoals, and are occasionally taken with a fly. They are to be found about piers, dock gates, and harbours, feeding, as a rule, better in winter than in summer.

Red Mullet (*Mullus barbatus*) are taken oftener in the trawl and trammel net than with rod and line; occasionally they are caught from a pier on paternoster tackle, with very small hooks baited with worms. Though Mullet command at the present time a fairly high price in the market, we do not now see the leviathans mentioned by ancient writers, Martial and Pliny quoting 2lb. as a not uncommon weight, whilst Juvenal records one of three

Digitized by Google

times that weight. In the time of the Cæsars, this fish was reared specially in aquaria in the neighbourhood of Rome and Naples, and vast sums were squandered on Mullet feasts (*see* page 168).

HAKE (*Merlucius vulgaris*), belonging to the same family as the Cod, Pollack, Ling, Coalfish, and Haddock, are also known as Sea-pike, coming in on our southern coasts after the Pilchards and Herrings, of which they are very fond. When the Pilchard nets have been shot, it is customary to put out four or five strong lines baited with fresh Pilchards, and weighted with boat-shaped sinkers of from ½lb. to 3lb. each, trying first deep down towards the bottom, and fishing shallower by degrees until the fish are found, as they feed at various depths, following the shoals of Pilchards, etc. They do not feed well in the day, and this fishing is therefore usually practised at night. The size varies from 3lb. or 4lb. up to 12lb. or more, and the teeth being very large and sharp, the size and strength of the hooks and tackle must be in proportion.

HADDOCK (*Gadus æglefinus*) seldom exceed 3lb. or 4lb. in weight, and are very numerous on the eastern coasts. Use the same baits and tackle as for Whiting. Mussels, lugworms, strips of Mackerel or fresh Herrings, are all good.

LING (*Lota molva*) are a very long and voracious fish, sometimes caught nearly five feet in length, on the Cod-lines, taking the same baits and being found on the same fishing grounds in the North Sea and elsewhere.

GURNARDS (*Trigla cuculus*) are very numerous all round the coast, and are well known from their peculiarly shaped head; there are several varieties, all of which will take the same spinners, flies, and baits as Mackerel and Whiting.

SMELTS (*Osmerus eperlanus*) and ATHERINE, or SAND-SMELTS (*Atherina presbyter*) swim in shoals at a very shallow depth, and require extremely fine tackle. They are mostly found in sheltered bays with sandy bottoms, in harbours, near the outfalls of drains or ditches. On the east and west coasts the Smelt is very plentiful, whilst the Atherine is usually caught on the south coast. Being very like Roach, float tackle is the best, as their very shy bite can then be more easily detected than by a paternoster. The best baits are small pieces of sand worms,

Digitized by Google

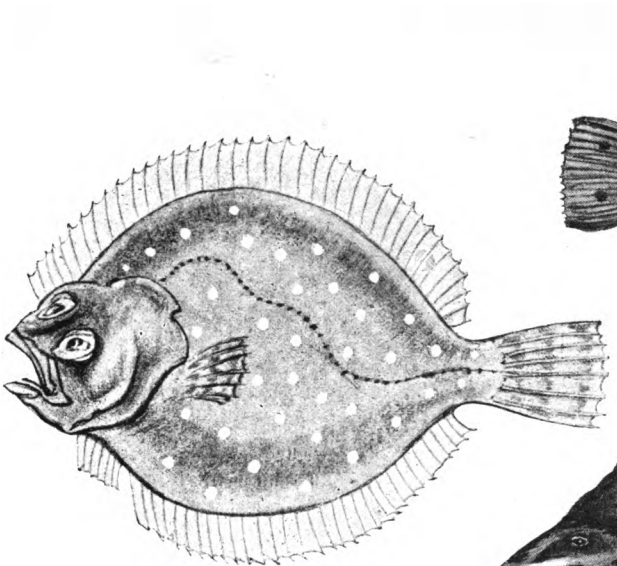
or live Shrimps hooked by the tail end on fine round Roach hooks.

Herrings (*Clupea harengus*) are not fish for which much angling is done, though they take a white fly readily in some parts; but they are chiefly useful, from a fishing point of view, as baits, and as ground-bait for better and larger fish. Much has been written about the migrations of the Herring family, Pennant referring to them as wintering off the coasts of Norway and under the Arctic ice, fattening on an abundant supply of crustacean food. They work their way down in vast hordes, in the spring, to our shores; but later investigations show that the Northern Herrings are a much smaller variety than our own, and though the uncertain movements of the shoals are extremely interesting, it is evident that Herrings, like Mackerel, lie generally at great depths, but nearer home come into shallower water at the breeding season, for the purpose of casting the spawn where the warmth and light of the sun will assist the hatching-out of the fry. Of the harvest of the sea, the Herring fishery is the most productive, for besides the many millions annually taken in nets, they form the food of sea birds and predatory fish of all sorts, who follow the shoals as they travel round the coast; yet notwithstanding the millions which perish or are destroyed by the onslaughts of so many different foes, no apparent diminution is made in the dense shoals which float from shore to shore.

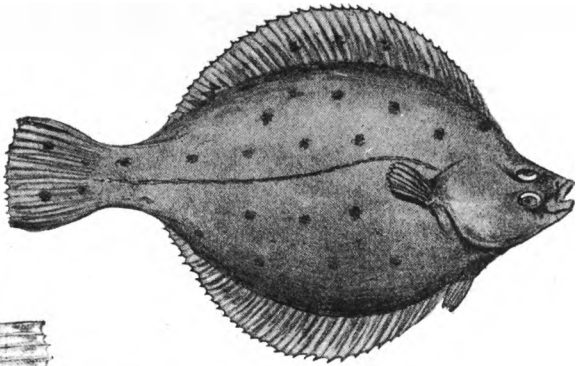
The Dory (*Zeus faber*) is of a golden olive colour, but though a well-known fish, is rarely taken by the angler. It is not gregarious, and frequents such rocky places as afford a good supply of small fish as well as a safe retreat. Dories will occasionally take a small live fish on a float-line.

The Pleuronects, or Flatfish, are of two kinds—one, including Turbot, Plaice, Soles, and Flounders, being compressed from side to side, except the head, which is distorted as well as flattened; and the other, like the Skate, flattened downwards or vertically. The coloured surface of a Sole is not its back, nor is the white part the belly; they are the upper and under sides, the whiteness of the latter being due to the absence of light, while the former approximates so closely in colour to the fish's home or resting-place on the sand as to be hardly distinguishable from it.

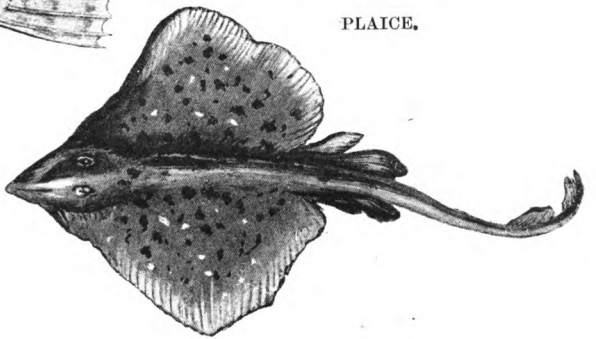
Digitized by Google



TURBOT.



PLAICE.



SKATE.

Digitized by Google

Digitized by Google

The TURBOT (*Rhombus maximus*) frequents sandbanks in all the British seas, and is taken on long lines or bolters, some of which extend for a mile and are shot across the tide, having on them over a thousand hooks; these are baited with pieces of Herring, Mackerel, Smelts, or similar fish. Turbot are also taken in the trawl-net, as are also BRILL, which are similar to Turbot, but have not such firm flesh.

The SOLE (*Solea vulgaris*) is generally taken in the trawl, but is sometimes caught on the hook, feeding best at night. A leger is the best tackle to use, with the bait lying on the bottom.

PLAICE (*Platessa vulgaris*) are occasionally caught from piers on a paternoster baited with a peeled boiled Shrimp or a lug-worm. The usual manner of fishing is with the trawl-net or a long line.

FLOUNDERS (*Platessa flesa*) and DABS (*Platessa limanda*) are found in most of the harbours, bays, and estuaries having a sandy or muddy bottom. A leger is the best form of tackle, and the baits are soft Crab, Shrimps, and worms.

SKATE (*Raia vulgaris*) are very numerous on sandy bottoms in the British seas. They are principally caught in trawl-nets and on trot-lines, but occasionally when ground-fishing for Cod, taking the Herring and Sprat for bait.

The ANCHOVY (*Clupea Encrasicholus*) seldom exceeds six inches in length; it has a long, sharp-pointed head, the upper jaw being much longer than the lower one, and the mouth of a very peculiar shape. As Buckland says, "It is a most marvellous bit of machinery for catching the food, which consists of small Crabs, and 'brett,' *i.e.*, fry and sea insects." In 1871 a shoal of Anchovies, estimated at 150,000, was caught in the Pilchard seines in Mevagissey Bay, Cornwall, and large quantities are observed round that coast from September to February. In the Mediterranean fisheries, the season is from April to July.

DOG-FISH (*Squalidæ*) and small Sharks are the plague of the fisherman, driving away other fish, besides seizing those already hooked. Dog-fish are very abundant all round the coast and will take any bait, but are usually considered useless when caught, besides having a spine in the tail which inflicts a very unpleasant wound, sometimes of a poisonous nature, as indeed are most of the wounds

Digitized by Google

inflicted by the spines of sea fish. One of my friends, who tried filleted Dog-fish, on the recommendation of his boatman, tells me that they are not bad eating.

I have above briefly mentioned the principal sea-fish, with the best baits to use. The angler should note the locations of the different fish at different seasons; some which feed near shore in the warm weather, go several miles out into deep water in the cold months of winter, and *vice versâ*. Cod, Whiting, and Mackerel are caught over sandy bottoms like the Turbot, Sole, and other flat-fish; Conger, Bream, Dory, Pollack, and Gurnards frequent the rocks; Basse and Hake follow the shoals of Pilchards and Herrings.

As regards the selection of suitable rods, the most useful for fly-fishing will be a strong stout grilse rod of 16ft. or 17ft., with snake rings and one or two spare tops of different lengths; for spinning, the ordinary strong mottled Pike-rod 12ft. or 13ft. in length will be the best. For end-rings some prefer the pulley, but these are very apt to chafe the line, and a revolving ivory or phosphor-bronze end-ring is much less likely to do so. Have a large bronze check winch to hold from 60 to 100 yards of line, according to circumstances; a good supply of paternosters of twisted gut, with brass swivels having projecting wires to keep the hooks clear of the main-line; strong gimp ones with three projecting loops to which the hooks are attached, for lighter work; and others of stout single gut for still smaller fish. Legers, made in a similar manner to those used for Barbel, but of strong Salmon gut, will also be found very useful. The flies and artificial baits have already been mentioned, and the casts and traces are the same as for fresh-water, but on a larger scale. Hooks of various sizes on gut, twisted gut, and gimp, with an assortment of leads and bullets, will also be necessary, and to contain the entire equipment of tackle, a japanned tin case with several trays will be the most useful.

Passing from rod-fishing to the various styles of hand-lines in use: these comprise different sorts of chopsticks, which are well known as being made of wire, wood, or whalebone, and

Digitized by Google

fastened either through or above the lead weight or sinker; they are provided at the end with an eye or loop to which the hook is attached, by means of either single gut, twisted gut, gimp, or twine. Then there are the drift-lines used in "railing." One useful pattern of these is made by fastening at the end of the main-line a pear-shaped plummet of the requisite weight, which may be from ½lb. to 5lb. or 6lb., or even more; about 6 inches above the lead a strong brass swivel is securely fastened to the line and projects from it, so that to the other end of the swivel may be fastened the trace of strong twisted gut or gimp, the former for choice; from the trace depend three or more hooks from loops made at equal distances in the trace, at the end of which a spinning bait will act as a stretcher. A similar tackle made lighter is used for Mackerel, a silver spinner being at the end, and three or four large white and scarlet flies being fastened to the loops on the trace.

Great quantities of Congers, Codlings, Basse, etc., are taken on long lines called "bolters," made like the eel-lines used in rivers, but of a much stronger description, with the hooks baited with Whelks, Mussels, Mud-worms, Sand-Eels, etc., and laid so as to meet the tide as it flows in over the beach, fastening the two ends to heavy stones or stakes. The hooks are looped on the main line, about four feet apart, and may be in number from a dozen to five or six hundred; wine corks, fastened on the line about twelve feet apart, will keep it clear of weeds.

There are some inconveniences attending the laying and raising of these bolters, as they can only be examined from a boat, or, in the case of small ones, by wading or waiting till the tide has run out. Many good anglers lay where practicable what is termed a "travelling bolter," which is made in the following manner:—Select a very heavy stone, and taking two or three turns round it with strong whipcord, fasten this securely with a knot, and attach to it a common large curtain ring. Just before the turn of the tide and the coming in of the young flood, lay this prepared stone as far out as practicable in a suitable position, pass the end of your line through the ring which is fastened to the stone, and walking back a sufficient distance up the beach, bring the line with you; at the same

Digitized by Google

time give off enough line from the reel to form a double line when you have reached the requisite distance. The two ends can now be knotted so as to form an endless line; and in the knot fasten a small piece of stick to form a stop when it reaches the ring on the stone, and thus prevent any of the hooks from being drawn into the ring. The hooks, mounted on short pieces of gimp or twisted gut, are of course attached to one-half only of the line, by means of loops knotted in the line at sufficient distances apart to prevent entanglement, and it will be obvious, that as the plain half is drawn in, the other half travels out to sea with the hooks fresh baited, the piece of stick preventing the line from being drawn too far; and by reversing the operation, as the fish are hooked, they are brought to land, the hooks rebaited and drawn out again, without the trouble of a heavy lead being thrown out each time, the fisherman remaining at high-water-mark.

Though sea-fish have a varied selection of food, it is sometimes as difficult to select something suitable for them as it is for their fresh-water cousins. For a general list of baits, the following may be useful for reference:—A long thin strip of bacon skin well soaked and scraped is often a good bait for Basse, whilst Mackerel have a very decided fancy for a narrow strip of one of their own family, cut so as to show the blue and silver. Cod, Whiting, Turbot, and others also take this bait well. The soft but tough inside portion of a Hermit Crab is a capital bait for Whiting, Trout, Basse, Pollack, and Mackerel. The ordinary Mussels found on rocks, piles of piers, etc., are invaluable for many fish. Pieces of Cuttle-fish and Squid are very good for Conger, Basse, and many other fish, being very tough and not easily washed or sucked off the hook.

Digitized by Google

INDEX.

A.

Aal, der, 149
Ablette, l', 155
Aborre, 107
Acanthopterygii, 107, 113, 158
Acerina vulgaris, 113
Ælian, writings of, 12, 13
Age of fish, determining, 38
Al, 149
American Indian legends respecting fish, 3
Indians, tackle used by, 7
Anabas scandens, 108
Anal fin, 38
ANCHOVIES, 177
Ancient hooks, etc., 8
tackle, 6
Angel Minnow, 70, 90
Anguilla, 149
acutirostris, 149
Conger, 167
latirostris, 149
mediorostris, 149
Anguille, 149
Antiquity of angling, 1, 163, 166
Arabrab, 3
Archer spinner, 89
Argentina, 155
Arrian, writings of, 11
Artificial baits, 36 (*see* Baits)
Asch, der, 77
Atergatis, 164
Atherina presbyter, 175
ATHERINE, 175
Ausonius on fishing, 14

B.

Baal, invention of angling ascribed to, 16
Bacon-rind as bait, 180
Baggits, 41
BAIT (or BAITS), ARTIFICIAL:
Angel Minnow, 70, 90
Archer spinner, 89
Bedford spinner, 68, 89
Bell's Life spinner, 69, 89
boxes for, 24
chain, 90
Chapman spinner, 68, 88
Cleopatra, 70, 90
Clipper, 89
Comet, 89
Devon Minnow, 70, 90
Flexible Phantom, 171
flies as (*see* Flies)
Gregory, 70, 90
Halcyon spinner, 72
Howse spinning tackle, 87, 88
kid leather, 146
Leopold spinner, 72
Minnows, 70, 90, 112
"Otter," 89
Pennell spinner, 89
Phantom, 71, 90, 171
Ring-mounted Devon, 90
spinners, 68, 72, 87-89
spoon, 90, 91
Tassel spoon, 90, 91
Totnes Minnow, 70, 90
Water Witch spinner, 68, 87

Digitized by Google

BAIT (or BAITS), NATURAL:
bacon-rind as, 180
Barbel as, 89
beetles as, 135
Bleak as, 68, 75, 155
Blood-worms as, 35
Brandlings as, 34
bread as, 144
bullock's pith as, 136
Caddis as, 143
cheese as, 35, 123, 134, 136
cherries as, 130
Chub as, 97
Cockchafers as, 135
Crab as, 177-180
Cuttlefish as, 180
Dace as, 75, 89, 97, 100, 105, 112
Dew worms as, 34
for Barbel, 118, 121
for bottom-fishing, 35
for Bream, 125
for Carp, 129
for Chub, 134, 135
for Dace, 146, 147
for Eels, 150
for Grayling, 79
for Gudgeon, 35
for Mackerel, 173
for Perch, 34, 111, 113
for Pike, 89, 100
for Roach, 142
for Rudd, 146
for Salmon, 41, 49
for sea-fish, 167
for Tench, 132
for Trout, 68
frogs as, 100
Garden worms as, 34
gentles as, 34, 123, 125, 132, 142, 146
Grasshoppers as, 135
greaves as, 122, 125, 134, 136
Gudgeons as, 68, 89, 97, 100, 111, 151
Herring as, 173-180
honey in paste as, 137, 143
Humble Bees as, 135
Limpets as, 174
BAIT (or BAITS), NATURAL—*continued*:
Loach as, 151
Lobed worms as, 34
Lob-worms as, 34
Lug-worms as, 34
malt as, 143
Marsh worms as, 34
Meadow worms as, 34
Minnows as, 68, 75, 111
Mussels as, 173, 174-180
paste as, 35, 125, 132, 142, 146
paste, making, 143
peas as, 130
Pilchards as, 175
Red worms as, 34
rice as, 143
Sand-eels as, 41, 170-180
scented, 35
Shrimps as, 174-180
slugs as, 134
Smelts as, 170-180
Sprats as, 174-180
Squid as, 180
Sticklebacks as, 159
wasp-grubs as, 132
wheat as, 35
Whelks as, 179
Whitebait as, 68
worms as, 34, 111, 113, 118, 125, 129, 132, 134, 142, 146, 150, 154, 170, 173-180
Bait-can, Improved, 98
Baiting-pot, 119
Barb, universal use of the, 8
Barbatello, 156
Barbe, die, 115
Barbeau, 115
BARBEL, 115
as baits, 89
baits for, 118, 121
float-fishing for, 116
ground-bait for, 118
hooks for, 117, 121
in deep water, 118
large, 115
legering for, 121, 144
line for, 117

Digitized by Google

BARBEL, names of, 115
Roach-tackle for, 123
rod for, 116
size of, 115
spawning of, 116
Barbfisk, 115
Barbolo, 115
Barker's (Thomas) "Art of Angling," 16
Baskets, fishermen's, 27
for Eels, 150
BASSE or BASS, 169
baits for, 170
fly-fishing for, 170
haunts of, 170
in history, 171
paternostering for, 170
spinning for, 170
Bassus, Cassianus, on fishing, 14
Bedford spinner, 68, 89
Beetles as baits, 135
Bell's Life spinner, 69, 89
Berners, Dame Juliana, on angling, 10, 14
Biblical mention of fish, 1, 4, 109
Bickerdyke snap-gorge, 105
BLEAK, 154
as baits, 68, 75, 155
fly-fishing for, 156
haunts of, 155, 156
hooks for, 156
names of, 154
Roach-tackle for, 156
scales, economic value of, 155
Blei, 124
Bliecke, 155
Blood-worms as bait, 35
Blow-lines, 135
Bobbing for Eels, 150
"Boke of St. Albans," hooks, etc., described in, 10, 15
Bolters, 179
for Congers, 167
for Turbot, 177
travelling, 179
Bone hooks, 8
BONITO, 172
Books on angling, early, 10, 14, 16
Bottom-fishing (*see* also Float-fishing):
baits for, 35
for Dace, 146
for Grayling, 79
hooks for, 32
Bowline knot, 29
Boxes for artificial baits, 24
for casts and flies, 21
for Pike tackle, 106
for tackle, 21
Brains as ground-bait, 136
Brandlings as baits, 34
Bread as bait, 144
Bread and bran as ground-bait, 139, 144
BREAM, 124
baits for, 125
Carp, 124
ground-baiting for, 125
in history, 124
names of, 124
Roach-tackle for, 125
Sea, 174
season for, 125
size of, 125
travelling float for, 125
White, 124
Breeding, ancient ideas on, 13
Brème, 124
BRILL, 177
Broad-nosed Eel, 149
Brochet, 80
Brochette, 80
Brunton gaff, 26
Built-cane rods, 44
BULL-HEAD, 159
Bullock's pith and brains as bait, 136
Bull Trout, 51

C.

Cad-bait, 64
Caddis as bait, 143
cases and flies, 63, 64
Cadew, 64
Calamary, 163
Cane rods, 44

Digitized by Google

Capitone, 134
Carlisle hooks, 31
CARP, 127
  baits for, 129
  Bream, 124
  Common, 127
  farming in Germany, 127
  float for, 129
  food of, 128
  Golden, 130
  haunts of, 128
  large, 128
  Leather, 127
  longevity of, 128
  Mirror, 127
  names of, 127
  playing, 129
  prolificacy of, 127
  Prussian, 130
  rod for, 129
  size of, 128
  spawning of, 127
  tackle for, 129
Carpa, 127
Carpe, 127
Carpione, 127
Carrion gentles as ground-bait, 40
Case for Pike-tackle, 106
Cast, Spey, 47
Casts and flies, box for, 21
Casting a dropper, 60
  dry-fly, 60
  gorge-bait, 100
  Salmon fly, 46
  spinning-bait, 72, 91
  stretcher, 60
  three flies, 60
  Trout fly, 59
Caudal fins, 38
Chabot commune, 159
Chain-bait, 90
Chalk-stream fishing for Trout, 61
Chapman spinner, 68, 88
CHARR, 52
  Gray, 52
  Northern, 52
  Welsh, 52
  Windermere, 52
Cheese as bait, 35, 123, 134, 136
  as ground-bait, 123, 136
Cherries as baits, 130
Chevanne, 134
Chevin, 134
Chondropterygii Branchiis fixis, 37
Chopsticks tackle for sea-fishing, 172, 173, 178
CHUB, 134
  as baits, 97
  baits for, 134, 135
  dibbing for, 135
  distinguishing, from Dace, 134
  fly-fishing for, 134, 136
  haunts of, 135
  line for, 135
  names of, 134
  rods for, 135, 136, 137
  season for, 134
  spawning of, 135
  spinning for, 136
  tackle for, 135
Classification of fishes, 37
Clay-balls as ground-bait, 118, 140, 147
Clearing ring, 27
Cleopatra bait, 70, 90
Climbing Perch, 108
Clipper bait, 89
Clupea Eucrasicholus, 177
  harengus, 176
COALFISH, 172
Cockchafers as baits, 135
COD, 174
CODLINGS, 174
Comet bait, 89
CONGERS, 167
  Greek preference for, 169
  in history, 167
  large, 167
  tackle for, 167
Congre, 167
Cooking Tench, 132
Coregonus Pennanti, 52
Corwyniad, 155
Cotton and Walton's book, 16
Cottus gobio, 159
Crab, soft, as bait, 177-180

Digitized by Google

Ctenoid scales, 37
Cuttlefish, 163
as bait, 180
Cycloid scales, 37
Cyclostomata, 37, 152
Cyprinidæ, 37, 115, 124, 127, 130, 131, 133, 134, 138, 145, 146, 153, 154, 156
Cyprinus abramis, 124
auratus, 130
carassius, 130
carpio, 127
cobitis, 156
gobio, 153
phoxinus, 156

D.

DABS, 177
DACE, 146
as baits, 75, 89, 97, 100, 105, 112
baits for, 146, 147
bottom-fishing for, 146
fly-fishing for, 146
ground-bait for, 147
haunts of, 146
line for, 148
names of, 146
Nottingham style of fishing for, 147
rod for, 147
winch for, 147
Dagon, legends of, 164
Dennys's (John) "Secrets of Angling," 16
Derceto, 164
Devon Minnow, 70, 90
ring-mounted, 90
Dew worms as baits, 34
Dibbing for Chub, 135
for Trout, 62
Disgorger, 27
for Pike, 99
Döbel, 134
DOG-FISH, 177
DORIES, 176
Dorsal fins, 38
Drag, for clearing hooks, 27
Drawing for Perch, sinking and, 113
Drier for lines, 83
Drift-lines for sea-fishing, 179
Dropper, casting, 60
Dry-fly, casting, 60 (*see* Flies and Fly-fishing)
Dubbe, angling with a, 14
Dugong, 165

E.

Earless Seals, 165
Earliest mention of a fish, 1
EELS, 149
ancient method of capturing, 13
baits for, 150
baskets for, 150
bobbing for, 150
Broad-nosed, 149
float-fishing for, 151
haunts of, 149, 152
large, 150
legering for, 151
lines for, 150, 151
live-baiting for, 151
Medium-nosed, 149
names of, 149
night-lines for, 151
pottles for, 150
rod for, 150, 151
Sharp-nosed, 149
size of, 150
sniggling, 151
spawning of, 150
Eel-fare, 150
Egyptian fish, Herodotus on, 13
sculptures representing fishing, 1, 2, 3, 7
Elritze or Elritse, 156
Elvers, 149
Ephemeridæ, 63
Epinoche, l', 158
Esocidæ, 37, 80
Esox lucius, 80
Esquimaux tackle, 7, 10
Essence d'Orient, manufacture of, 155

Digitized by Google

Evolution of hooks, 8, 10
Eyed flies, boxes for, 24

F.

Fastenings and knots, 29
Field lead, 67
Fijian lines, 17
Fins, varieties of, 38
Fisherman's Ring, 166
Fishes, classification of, 37
determining age of, 38
earliest mention of, 1
fins of, 38
scales of, 38
teeth of, 38
Fish-gods, 164
FISHING-FROG, 169
Fishing Gazette float, 94
Flatfish, 37, 176
Flexible Phantom bait, 171
FLIES, ancient, 12
attaching, 29
boxes for, 21
casting, 46, 59, 60
cocking of, 60
diary of, 45
dry, 60
effects of weather on rise of, 58
floating, 61
for Basse, 170
for Bleak, 156
for Chub, 134, 136
for Dace, 146
for Grayling, 79
for Mackerel, 172
for Perch, 112
for Pike, 92, 105
for Salmon, 45
for sea-fish, 170, 172
for Trout, 57
May, 62 (*see* May-flies)
natural, for Trout, 62
Stone, 64
wet, 62
Flights for Pike, 85
for Trout, 68, 87
Flint barbed weapons, 8
flakes used as fish-hooks, 6
FLOAT-FISHING (*see* Bottom-fishing):
for Barbel, 116
for Bream, 125
for Carp, 129
for Chub, 137
for Eels, 151
for Gudgeon, 153
for Perch, 113
for Roach, 141, 145
for Tench, 132
Floating fly, manipulating, 61
Floats, ancient, 10
for live-baiting, 94
pilot, 98
Flussbarsch, 107
FLY-FISHING, ancient, 12
dry, 60
for Bleak, 156
for Chub, 134, 136
for Dace, 146
for Grayling, 78
for Mackerel, 172
for Perch, 112
for Pike, 92, 105
for Roach, 142
for Salmon, 45
for Trout, 55
lines for, 20
wet, 62
Fly triangles, loose, 85
Folding gaff, 26
Forelle, die, 51
Formalin, 68
Francis snap, 104
Frogs as baits, 100
"Fysshynge with an Angle," treatise on the art of, 14

G.

Gadidæ, 37
Gadus æglefinus, 175
barbatus, 174
merlangus, 173
Gaffs, 26
Brunton, 26
folding, 26
telescopic, 26

Digitized by Google

Gag for Pike, 93
Ganoid scales, 37
Garden worms as baits, 34
Gasterosteus semi-armatus, 158
Geneva Trout, 51
Gentles as bait, 123, 125, 132, 142, 146
as ground-bait, 140
breeding, 34
Girs, 113
Gjors, 109
Glaucus, legend of, 8
Glittering objects swallowed by fish, 165
Gobione, 153
Golden Carp, 130
Tench, 133
GOLDFISH, 130
Goldschlei, 133
Gorge-baits, 100
Oppian s allusion to, 11]
Gorge-fishing for Pike, 100
Gos, 109
Goujon, le, 153
Grasshoppers as baits, 135
Gray Charr, 52
GRAYLING, 77
baits for, 79
bottom-fishing for, 79
distribution of, 77
fly-fishing for, 78
fragrant odour of, 77
hooks for, 79
lines for, 79
names of, 77
rod for, 79
spawning of, 78
Great Lake Trout, 51
Greaves as bait, 122, 125, 134, 136
as ground-bait, 122, 136
Greek legends, 7, 8
Gregory bait, 70, 90
Gremille, 113
GREY MULLET, 174
Grilse, 41
Grongo, 167
GROUND-BAIT, brains as, 136
bread and bran as, 139, 144
carrion gentles as, 140
GROUND-BAIT, cheese as, 133, 136
clay-balls as, 118, 140, 147
for Barbel, 118
for Dace, 147
for Roach, 139, 143
for Rudd, 146
for sea-fish, 163
for Tench, 132
gentles as, 140, 143
greaves as, 122, 136
potatoes as, 140
worms as, 118, 143
Ground-baiting, Nottingham style of, 119
pot for, 119
Thames style of, 118
Gründling, 153
GUDGEON, 153
as baits, 68, 89, 97, 100, 111, 151
baits for, 35
float-fishing for, 153
haunts of, 153
hooks for, 154
names of, 153
raking for, 153, 154
rod for, 153
size of, 153
GURNARDS, 175
Gut, introduction of, for angling, 16
manufacture of, 17
Murcian, 17
Pepys's mention of, 16
Gwyniad, 52

H.

HADDOCKS, 175
legend regarding, 5
Hair lines, 16, 17
HAKE, 175
Halcyon spinner, 72
Hand-lines for sea-fishing, 178
Harpoons, 7
Hasling, 146
Haversacks, 27
Hawkins on Dame Juliana Berners' writings, 14

Digitized by Google

Hecht, 80
Herodotus on Egyptian fish, 13
HERRINGS, 176
  as bait, 173-180
Hippocampus brevirostris, 165
History, fish in, 1, 13, 163, 166
Homer's allusions to fishing, 13
Honey in paste as bait, 137, 143
HOOKS, 29
  angle of, 31, 32
  antiquity of, 7
  bone, 8
  Carlisle, 31
  cheap, to be avoided, 29
  evolution of, 8, 10
  for Barbel, 117, 121
  for Bleak, 156
  for bottom-fishing, 32
  for Grayling, 79
  for Gudgeon, 154
  for Perch, 111, 113
  for Pike, 32, 85, 95, 103, 105
  for Roach, 33, 141, 144, 145
  for Rudd, 146
  for Salmon flies, 32
  for Trout flies, 32
  for worms, 32
  Kendal, 31
  Kirby, 31
  Limerick, 31
  lip, 31
  manufacture of, 30
  materials once used for, 8
  names of, 31
  New Zealanders', 8
  Pacific Islanders', 8
  prehistoric, 6
  round, 33
  shank of, 33
  shapes of, 31
  Sneck, 31
  Tahitian, 8
  testing shapes of, 31, 33
  thorn, 10
  varieties of, 31
  wooden, 8
Horke, 113
Howse spinning tackle, 87, 88
Humble Bees as baits, 135

I.

Ichthyophagi, the, 11
"I. D.," 16
Improved bronze winches, 66, 82

J.

JACK, 80 (*see* Pike)
Jardine snap, 104

K.

Karp or Karpe, 127
Karpfe, 127
Kaulbarsch Steinschwert, der 113
Kaulkopf, der, 159
Kelts, 41, 42
Kendal hooks, 31
Kettle for live-baits, 97
Kid leather as bait, 146
"Kippers" (Salmon), 41
Kirby hooks, 31
Knots and fastenings, 29
Kraken, 163

L.

Labrus variegatus, 174
Lachs, der, 39
Ladders, Salmon, 40, 42
Laexing, 39
Lake of Geneva Trout, 51
Lake Trout, Great, 51, 54
LAMPERNS, 152
Lamprete, die, 152
LAMPREYS, 152
Lamproie de Mer, 152
  de Rivière, 152
Landing-net, 25
Landing-ring, collapsible, 25
Lauson's (W.) notes on "I.D.," 10, 16
Lax, 39
Lead, *Field*, 67
Leaps, Salmon, 40, 42

Digitized by Google

Leather Carp, 127
Legends connected with fishing, 3, 7, 163, 166
Legering for Barbel, 121, 144
for Eels, 151
for Roach, 144
Leopold spinner, 72
Leuciscus albus, 154
bipustulatus, 155
cephalus, 134
erythrophthalmus, 145
phoxinus, 156
rutilus, 138
vulgaris, 146
Limerick hooks, 31
Limpets as baits, 174-180
LINES, 20
drift, for sea-fishing, 179
drying, 83
Fijian, 17
for Barbel, 117
for Chub, 135
for Dace, 148
for Eels, 150, 151
for fly-fishing, 20
for Grayling, 79
for Perch, 110, 113
for Pike, 82, 94
for Roach, 140, 141
for Salmon, 45
for sea-fish, 168-180
for Trout, 56, 67
hair, 16, 17
hand, for sea-fishing, 178
hemp, 21
joining, 29
Juliana Berners', 10
materials used for, 16
New Zealanders', 17
plaited silk, 21
repairing broken, 29
silk, 21
Tahitians', 17
tapered, 20
waterproofing silk, 56
Line-drier, 83
LING, 175
Lip hooks, 31
Live-bait on double hook, 95
snap tackle, 103
Live-baits, kettle for, 97
LIVE-BAITING, floats for, 94
for Eels, 151
for Perch, 112
for Pike, 93
for Trout, 74
hooks for, 95
line for, 94
season for, 98
Liver-gentles as bait, 142
LOACH, 156
as baits, 151
Lob or Lobed worms as baits, 34
Loch Franche, 156
Loch Leven Trout, 51
Loggerhead, 134
Lophius piscatorius, 169
Lota molva, 175
Lug-worms as baits, 34
Lupus, 171
Luzzio, 80
LYTHE, 172

M.

Macedonians, fly-fishing practised by, 12
MACKEREL, 172
baits for, 173
fly-fishing for, 172
prices of, at different periods, 173
railing for, 173
tackle for, 173
whiffing for, 173
Mahometan fish-lore, 4
Malacopterygii Abdominales, 138, 153
Apodes, 149
Malt as bait, 143
Manatee, 165
Markham's (Gervase) work on angling, 16
Marsh worms as baits, 34
May-flies, 63
artificial, 64
fishing with, for Trout, 62
Murray, 64
Meadow worms as baits, 34

Digitized by Google

Medium-nosed Eel, 149
Merlangus carbonarius, 172
pollachius, 172
Merlucius vulgaris, 175
Minnow, Angel, 70, 90
artificial, 112
Devon, 70, 90
Totnes, 70, 90
MINNOWS, 156
as baits, 68, 75, 111
haunts of, 156
names of, 156
trap for, 157
Mirror Carp, 127
Mizdeh, 3
Mormyrus oxyrhynchus, 3
Mosaic laws concerning fish, 2
Moscrop winch, 18
Mugil capito, 174
MULLET, 174
feasts, Roman, 168
high prices paid by the Romans for, 168, 175
Mullus barbatus, 174
MURÆNA, 168
Muræniдæ, 37, 149
Murcian gut, 17
Mussels as baits, 173, 174, 180
Mythology, fish in, 3, 163, 166

N.

Natural baits (*see* Baits)
flies for Trout, 62
Neptune, legend of, 7
Net, antiquity of the, 7
Neunauge, 152
New Zealanders' hooks and lines, 8, 17
Night-lines for Eels, 151
Northern Charr, 52

O.

Oan, 164
Octopus, 163
Ombre, l', 77
Oppian, poems of, 11
Origin of angling, 1, 16
Osmerus eperlanus, 175
"Otter" bait, 89
live-bait snap, 103
traveller and tackle, 117

P.

Pacific Islanders' hooks, 8
Paling, de, 149
Pannier, fisherman's, 28
Parr, 41
Paste as bait, 35, 125, 132, 142, 146
honey in, 143
making, 143
Paternoster, 111
PATERNOSTERING for Basse, 170
for Perch, 110
for Pike, 105
for sea-fish, 170-180
Peal, 52
Pearch, 107
Pearl-fish, 155
Pearls, imitation, 155
Peas as baits, 130
Pectoral fins, 38
Penk, 156 (*see* Minnows)
Pennell snap, 104
spinner, 89
Pepys' mention of "gutt," 16
Perca fluviatilis, 107
Labrax, 108, 169
Lucioperca, 109
PERCH, 107
baits for, 34, 111, 113
care required in handling, 7
Climbing, 108
float-fishing for, 113
fly-fishing for, 112
haunts of, 110
hooks for, 111, 113
in history, 107
Juliana Berners' tackle for, 10
large, 108, 109
lines for, 110, 113
live-baiting for, 112
names of, 107
paternostering for, 110

Digitized by Google

PERCH, Pike, 109
rod for, 110
Sea, 108
season for, 110
size of, 108, 110
spawning of, 108
spinning for, 112
winch for, 110
Perche, 107
Percidæ, 37, 107, 113, 169
Perla bicordata, 64
Pesce Persico, 107
Petromyzon fluviatilis marinus, 152
Phantom baits, 71, 90
flexible, 171
Phocidæ, 165
Phryganea grandis, 65
PIKE, 80
baits for, 100
disgorger for, 99
flights for, 85
fly-fishing for, 92, 105
food for, 124
gaff for, 26
gag for, 93
gorge-fishing for, 100
haunts of, 80
hooks for, 32, 85, 95, 103, 105
Howse tackle for, 87, 88
Juliana Berners' tackle for, 10
landing, 92, 99
large, 80
lines for, 82, 94
live-baiting for, 93
names of, 80
paternostering for, 105
Perch, 109
playing, 92, 99, 106
rod for, 82, 102
Sea, 175
size of, 80
snap-fishing for, 102
snap-gorge tackle for, 105
spawning of, 80
spinning for, 82
tackle, cases for, 106
trace for, 83, 95
trolling for, 100
PIKE, voracity of, 81
weather for sport with, 81
winch for, 93
PILCHARDS as baits, 175
Pilot floats, 98
Pith and brains as bait, 136
Placoid scales, 37
PLAICE, 177
Platessa limanda, 177
vulgaris, 177
Pleuronectidæ, 37, 176
Plugging the Pope, 113
Poisson bleu, 77
POLLACK, 172
Pollan, 52
Polynesian legends respecting fish, 3
Pope, 113
plugging the, 113
Poseidon, legend of, 7
Pot for ground-baiting, 119
Potatoes as ground-bait, 140
Pottles for Eels, 150
POUT, Whiting, 173
Powan, 52
Prawn tackle for Salmon, 49
Prehistoric hooks, 6
Prussian Carp, 130
Pyramids, sculptures on the, 2, 3

R.

Raia vulgaris, 177
Railing, 173, 178
for Mackerel, 173
RED MULLET, 168, 174
Red worms as baits, 34, 35
Redds, 40
Reels, 18 (*see* Winches)
Simplex, 20
Requisites, the angler's, 18
Rhombus maximus, 177
Rice as bait, 143
Ring-mounted Devon, 90
River Trout, 51
ROACH, 138
as baits, 89, 97
baits for, 142
basket for, 27

Digitized by Google

ROACH, fishing with one gentle for, 144
float-fishing for, 141, 145
fly-fishing for, 142
ground-bait for, 138, 143
haunts of, 138, 139
hooks for, 33, 141, 144, 145
large, 138
legering for, 144
lines for, 140, 141
names of, 138
playing, 145
plumbing depth for, 141
rod for, 140
season for, 138
size of, 138
spawning of, 138
Roach-tackle for Barbel, 123
for Bleak, 156
for Bream, 125
ROCK WHITING, 173
RODS, built-cane, 44
for Barbel, 116
for Carp, 129
for Chub, 135, 136, 137
for Dace, 147
for Eels, 150, 151
for Grayling, 79
for Gudgeon, 153
for Perch, 110
for Pike, 82, 102
for Roach, 140
for Salmon, 44
for sea-fish, 168-180
for Tench, 132
for Trout, 55, 66, 73
Juliana Berners', 10, 15
Roman fish banquets, 168, 175
Rosse, 138
Rotengle, 145
Rothange, der, 138
Rouget, 138
Round hooks, 33
RUDD, 145
baits for, 146
haunts of, 145
hooks for, 146
Ruffe, 113
Running float, 117
Running lines, 20 (*see* Lines)

S.

Saddle snap, 104
"St. Albans (The Boke of)," hooks, etc., described in, 10, 15
St. Peter and the tribute money, 5
SAITHE, 172
Salm, der, 39
Salmo alpinus, 52
cambricus, 52
colii, 52
eriox, 51
fario, 51, 54
ferox, 51, 54
graii, 52
levenensis, 51
salar, 39
trutta, 51
willughbii, 52
SALMON, 39
baits for, 41, 49
changes in colour of, 44
flies for, 32, 45
fly, how to throw, 46
food of, in the sea, 41
gaff for, 26
hatching of, 40
instinct of, 43
ladders, 40, 42
large, 39
leaps, 40, 42
line for, 45
names of, 39, 40, 41
prawn tackle for, 49
Redds, 40
return of, to their native rivers, 43
rod for, 44
sea-lice on, 43
size of, 39
spawning of, 40
speed of, 42
spinning for, 49
stairs, 40, 42
striking, 48
Thames, in Walton's time, 40
Trout, 51

Digitized by Google

SALMON, where to find, 48
winch for, 45
worms for, 49
young, names of, 40, 41
Salmonidæ, 37, 39, 51, 52, 77
fragrant odour of some species of, 77
Samlet, 40, 41
Sandbarsch, 109
Sand-eels as baits, 41, 170-180
Sandra, 109
Sandre, 109
SAND-SMELTS, 175
Saumon, 39
Scales, varieties of, 37
Scardapesce, 158
Scardofisso, 158
Scented baits, 35
Schelly, 52
Schleihe, 131
Schmerlein, 156
Schuppfisch, 134
Scomber pelamis, 172
scomber, 172
Scouring worms, 35
Scriptural mention of fish, 1, 4, 109
Sculptures, ancient, representing fishing, 1, 2, 3, 7
SEA-ANGLER, 169
SEA BASSE, 168, 169 (*see* Basse)
SEA BREAM, 174
SEA-FISHING, 161
baits for, 167-180
boatman for, 162
chop-sticks tackle for, 172, 173, 178
ground-bait for, 163
hand-lines for, 178
legers for, 178
"local" ideas of tackle for, 172, 173, 178
localities for, 162, 178
marks for, 162
paternosters for, 178
rods for, 178
value of cargoes landed, 161
Sea Horse, 165
Sea Perch, 108
Sea Pike, 175
Sea Serpent in history, 163
Sea Trout, 51
Seals, Earless, 165
Seeal, 167
Sepia, 163
Sewin, 52
SHARKS, small, 177
Sharp-nosed Eel, 149
Sheep's brains as ground-bait, 136
Shilbeh, 3
Shrimps as baits, 174-180
Silk lines, 21
lines, waterproofing, 56
Silkworm gut, manufacture of, 17
Simplex reel, 20
Sinking and drawing for Perch, 113
SKATE, 177
Skegger, 40
Skelley, 134
Slip-knot, 29
Slugs as baits, 134
SMELTS, 175
as baits, 170-180
fragrant odour of, 77
SMELTS, SAND, 175
Smolts, 41
Snap, Francis, 104
gorge, Bickerdyke, 105
hooks, 103
Jardine, 104
"Otter," 103
Pennell, 104
Saddle, 104
Spring, 103
tackle, 103
Snap-fishing for Pike, 102
Sneck hooks, 31
Sniggling Eels, 151
Solea vulgaris, 177
SOLES, 177
Sparus centrodontus, 174
Spear, antiquity of, 7
as an emblem, 7
Spey cast, 47
switch, 47
Spinarola, 158
Spinner, Archer, 89

Digitized by Google

Spinner, Bedford, 68, 89
Bell's Life, 68, 89
Halcyon, 72
Howse, 88, 89
Pennell, 89
Water Witch, 68, 87
SPINNING for Basse, 170
for Chub, 136
for Perch, 112
for Pike, 82
for Salmon, 49
for Trout, 65
Spinning-bait, casting the, 91
Spinning-baits, natural, 89
Spoon-baits for Pike, 90
Spoon, tassel, 90, 91
Sprats as bait, 174-180
Spring snap, 103
Squalidæ, 177
Squid as bait, 180
Stairs, Salmon, 40, 42
Standart, 109
Stechlebaar, 158
Stewart worm-tackle, 74
Stichling, 158
STICKLEBACKS, 158
as baits, 159
nest of, 158
spawning of, 159
Stone-fly, 64
Stretcher, casting, 60
Suetonius's allusion to Nero's fishing, 13
Switch, Spey, 47

T.

Tackle (*see* Gut, Hooks, etc.)
ancient, 6
boxes for, 21
Tahitians' hooks, 8
lines, 17
Tanche, 131
Tassel spoon, 90, 91
Tecon, 41
Teeth of fishes, 38
Telescopic gaff, 26
TENCH, 131
baits for, 132
cooking, 132
edible qualities of, 123
Golden, 133
ground-bait for, 132
haunts of, 131, 132
hibernation of, 131
Juliana Berners' tackle for, 10
large, 131
names of, 131
rod for, 132
size of, 131
tackle for, 132
Testing hooks, 31, 33
Thames Pike-flight, 85
Thorn hooks, 10
Throwing dropper, 60
dry-fly, 60
gorge-bait, 100
Salmon fly, 46
spinning-bait, 72, 91
stretcher, 60
three flies, 60
Trout fly, 59
Thymallus signifer, 77
vulgaris, 77
Tinca vulgaris, 131
Totnes Minnow, 70, 90
Trace, fastening, to line, 83
for Pike, 83, 95
for Trout, 67
Trap for Minnows, 157
Traveller for Barbel, 117
for Bream, 125
Travelling bolter, 179
Tree-climber, 108
Triangles, loose fly, 85
Trident, legend of the, 7
Trigla cuculus, 175
TROLLING, baits for, 100
for Pike, 100
weed-hook for, 100
TROUT, 51
artificial baits for, 68
baits for, 68
Bull, 51
chalk-stream fishing for, 61
colour of, variable, 53

Digitized by Google

TROUT, dibbing for, 62
flies for, 57
flies, hooks for, 32
flights for, 68, 87
floating flies for, 61
fly, throwing, 59
fly-fishing for, 55
Great Lake, 51
haunts of, 54
Lake of Geneva, 51
landing, 61
large, 53
line for, 56, 66
live-baiting for, 74
Loch Leven, 51
names of, 51
playing, 61
River, 51
rods for, 55, 66, 73
Salmon, 51
Sea, 51
sizes of, 53
spawning of, 54
spinning for, 65
spinning-baits for, 68
trace for, 67
White, 52
winches for, 56, 66
worm-fishing for, 73
worms for, 74
Troute, 51
Trowte, 51
Truht, 51
Truite, 51
TURBOT, 177

U.

Umber, 77 (*see* Grayling)

V.

Vandoise, 146
Vendace, 52
Ventral fins, 38
Veron, 156
Vishnu, fish-incarnation of, 4, 164

W.

Walton's "Compleat Angler," 16
Wasp-grubs as baits, 132
Wasserwolf, 80
Water sheep, 139
Water Witch spinner, 68, 87
Waterproofing silk lines, 56
Weather, effects of, on rise of flies, 57
Weed-hook, 100
Welsh Charr, 52
Wet-fly fishing, 62
Wheat, boiled, as bait, 35
Whelks as baits, 179
Whiffing for Mackerel, 173
Whitebait as baits, 68
White Bream, 124
Phantom, 71
Trout, 52
WHITING, 173
WINCHES, 18
brass, 20
bronze check, 18
for Dace, 147
for Perch, 110
for Pike, 93
for Salmon, 45
for sea-fish, 168-180
for Trout, 56, 67
Improved bronze, 66, 82
Moscrop, 18
wood, 19
Wooden hooks, 8
WORMS, 34
artificial, 36
as bait, 49, 74, 111, 113, 118, 125, 129, 132, 134, 142, 146, 150, 154, 170, 173-180
as ground-bait, 118
Blood, 35
Brandlings, 34
Dew, 34

Digitized by Google

WORMS, Garden, 34
hooks for, 32
Lob or Lobed, 34
Lug, 34
Marsh, 34
Meadow, 34
old names for, 34
Red, 34, 35
scouring, 35
Stewart's tackle for, 74
Worship of fish, 5
WRASSE, 174

Z.

Zalm, der, 39
Zander or Zandr, 109
Zeelt, 131
Zeus faber, 176

Fish Ponds

AND OTHER WATERS.

Cultivate & Improve.

WRITE FOR INFORMATION.

Fish Culture for All.

The best kinds of Aquatic and other Plants, Mollusca, and Crustaceans. Eggs for Hatching; Fish for Stocking. Apparatus and all appliances supplied. Send for List. Having visited the various Fisheries of the World and made a special study of them, we are prepared to render very material aid to all who wish to improve their Waters.

"A HANDY GUIDE TO FISH CULTURE."

By J. J. ARMISTEAD. 1s. 2d., post free.

THE SOLWAY FISHERY CO., LTD., DUMFRIES.

Digitized by Google

! HARDY'S 'GOLD MEDAL' RODS !

AND TACKLE ARE BEYOND COMPETITION ! ! !

Highest Awards in the World. 37 Medals.

THE BEST SALMON AND TROUT RODS MADE ARE

The 'CHAMPION,' £12 5/- 18ft. *Cane-Built Steel Centre.*

The 'HI-REGAN,' £10. 16ft. *Cane-Built Steel Centre.*

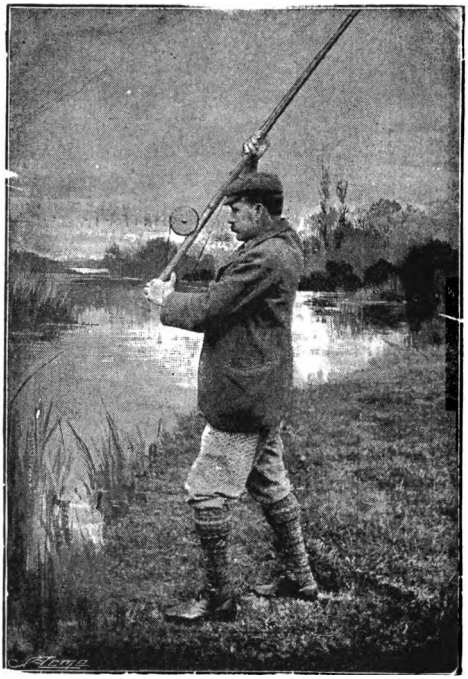
The 'CHOLMONDELEY-PENNELL,' £9 5/- 14ft. *Cane-Built Steel Centre.*

The 'SPECIALS,' £5 16/6 each. 11ft. *and* 12ft. *Cane-Built Steel Centre.*

THE 'ALNWICK' GREENHEART RODS ARE SUPERIOR TO ALL OTHER MAKERS' WOOD RODS.

IMPORTANT.—If you want the best of everything in Rods, Flies, Tackle, &c., write us, it will pay you. Remember the "Best" is always the Cheapest.

CATALOGUE FREE



Mr. J. J. HARDY, the Champion of the World, making his Record Cast of 49yds. 1ft. 9in. with an 18ft. Steel Centre Rod.

CATALOGUE over Three Hundred Illustrations, 270 Pages, FREE!

The "FIELD" says:—"It ought never to be forgotten that it is to Messrs. Hardy, of Alnwick, we owe the supremacy we have achieved as rod makers."

HARDY BROTHERS,

ALNWICK, ENGLAND.

RETAIL BRANCHES:

61, Pall Mall, LONDON, S.W.; 5, South Street, David Street, EDINBURGH; and 12 to 14, Moult Street, MANCHESTER.

Digitized by Google

Alfred Clifford's

PATENT EEL TRAP.

Highest Awards for Traps— { BRONZE MEDAL AND DIPLOMA OF HONOUR, *Truro, Cornwall*, 1893.
SILVER MEDAL AND DIPLOMA OF HONOUR, *Scarborough*, 1895.

Under the immediate patronage of the Fishmonger's Company,

The Mayor of Scarborough when presenting the Medal, said he had in use several of the Traps, and that they were giving him great satisfaction, and that he should always speak highly of them.

Patronised by His Grace the Duke of Portland, the Earl of Ashburnham, Sir Rose Price, Bart., Sir Joseph Bailey, Bart., The Earl of Annisley, Lord Aylesford, Lord Tredegar, Lord Greville, Sir E. Buckley, Bart., Sir R. Wright, Bart., Lord Gifford, Sir H. Rae Reid, Bart., Lord Hastings, &c.

Sir Rose Price, Bart., says: "It is a capital trap."

Sir Joseph Bailey, Bart., says: "They answer very nicely."

WARRANTED to catch Eels in any quantity, and in any water; easy to enter, cannot return; with Bait Box and Instructions for Irresistible Bait, which it only requires once a fortnight, made of galvanised iron, will last for years, and will catch enough Eels in a few nights to repay its cost. There is no trouble in baiting, and it can be thrown in any suitable part of the river. It will catch Eels all the year round. The Trap is fitted with woven wire Bait Box and Safety Pins, also Steel Needle-pointed Entrance Wires, which make it impossible for the Eels to withdraw. It will catch any quantity of Eels where the old wicker or iron traps are useless, only requires the bait placed in the box and thrown in the water. Full instructions with each Trap.

"SIR,—The Eel Traps you sent to Sir Joseph Bailey have been most successful. We caught sixty-eight Eels yesterday morning, the two traps having been left down two nights.—Yours truly, HERBERT C. BAILEY."
[The above Traps were one 5ft., and one 4ft.].

"Claughton, Caton, Lancaster, April 27th, 1897.—DEAR SIR,—The Eel Trap answers first-rate. I got fourteen first night I set it, and one night since I had thirty-seven, all good size. I have never had a blank.—Yours very truly, T. H. CAMPBELL."

"Avon Castle, Ringwood, Hants.—The Eel Traps I had from you have proved an enormous success; I occasionally get between forty and fifty, one trap one night.
"J. TURNER TURNER."

"Rigmarden Park, Kirkby Lonsdale, August 27th, 1897.—DEAR SIR,—I have had two of your Patent Eel Traps down twelve days, and caught 293 Eels. They are a splendid contrivance. The Minnow Traps were also a success.—Yours truly, CHAS. W. WILSON."

"Northcote House, Sutton.—DEAR SIR,—The 3ft. 6in. Eel Trap received from you last July I have found very successful, having caught in it as many as thirty-six in one night. It certainly is the best Trap I have ever used.—Yours truly, G. A. GILMAN."

"East and West Mills, Bridport, August 28th, 1895.—DEAR SIR,—The Trap answers very well indeed. We caught upwards of thirty Eels last night, the first time we put it in. I expect to caton a good many first dirty water, as the runners begin to come down the stream this time of the year up to November.—Yours truly, JOHN FOWLER."

Also used by the Solway and other Fisheries for keeping down the Eels.

PRICE LIST AND FULL PARTICULARS FREE.

Also Vermin and Animal Traps.

ADDRESS:

A. CLIFFORD,

PATENT WORKS, HAWLEY, KENT.

Digitized by Google

Foster's World "Challenge!"

ANY Rod-maker is invited to a test (to be carried out by properly qualified engineers) of his make of Rod against **FOSTER'S "CHALLENGE" BRAND STEEL RIBBED ROD,** weight for weight, length for length, and diameter for diameter, the losing side to pay a stated sum to a public charity to be named by the winner

☞ *The above challenge has been issued by Foster's, Ashbourne, Derbyshire for over FOUR years, in their advertisements and catalogues, but it has not as yet met with an acceptance.*

Samples of what is said of Foster's Steel Ribbing as a means of strengthening Rods, being extracts from latest reports (unsolicited) from habitual users:—

Grosvenor Hotel, Stockbridge, Hants.

"I used the trout rod to-day, and find it much improved—as was the case with the other rod which you 'Ribbed' for me earlier in the year."

G. WIGRAM (Major-General).

Fulshaw Hall, Wilmslow.

"I am delighted with results of 'Ribbing' the three trout rods, which were sent you at the beginning of the year. So pleased am I after using them through the season, that I intend sending you nine more rods to be so treated, five trout and four salmon."

J. B. M. LINGARD MONK.

Dr. Brunton—to whom was handed the rod sent for a report to the Editor of the *Fishing Gazette*—in a second favourable report, after three years' use, says:

"I am pleased to say that the more I use Messrs. Foster's Wire Coated Built Cane Rod, the more I am delighted with it."

Any make of Rod, old or new, can be "Steel Ribbed," and thus stiffened, strengthened, and given a new lease of life, by being converted thereby into a modern dry fly Rod, at a uniform cost of 5s. 9d. per Rod with one top; or 7s. 6d. per Rod with two tops; Rods over 12ft. long, 3s. 6d. extra. Scores of Testimonials. See our Lists (free).

FOSTER'S ACME METAL CENTRED LINES

have been recommended by all the leading living authorities.
Samples and Lists sent post free.

FOSTER'S LISTS FREE.

265 pages, 300 illustrations. The foregoing *free*. Complete edition, 315 pages and 310 illustrations, 1s., which latter deposit may be deducted from first order amounting to 10s.

FOSTER BROS., ASHBOURNE, ENGLAND.

Digitized by Google

SAFE & CLEANLY.

Weighs only 8½oz. Gives a steady heat from 3 to 4 hours without re-charging.

Price: 7/6 German silver, copper 6/6, 3/6 tin. Re-fills (each lasting 3 to 4 hours), 50 for 1/6, or packed in hermetically sealed tins (each tin containing 7 re-fills), 4 tins for 1/6. Holders for carrying re-fills, 3d. Instra foot-warmers, copper, 10/6; tin, 7/6. Refills, large, 50 for 2/3. Carriage 3d. Orders from abroad must be accompanied by postage for 2lb.

The Instra Warmer.

Patented throughout the World.

"WARMTH IS LIFE."

The INSTRA is imperceptible in a pocket.

The INSTRA prevents and cures Chills.

The INSTRA alleviates Rheumatism, Lumbago, Sciatica, &c.

The INSTRA is extremely useful to Fishermen, as it can either be used in the pocket, and thereby prevent a chill, or it can be attached to the rod, and prevent the hands becoming almost frozen.

SURGEON-GENERAL SIR WM. MACKINNON, K.C.B. (late Director of the Army Medical Department), writes:— "28, EVELYN GARDENS, S.W. "13th, Feb., 1897.

"I went out one cold day without a great coat, carrying the 'Instra' in a side pocket, and it kept me warm and comfortable. I then came in and sat in a cold room without a fire, still having the 'Instra' in my pocket, which kept me quite warm. If we had had such a thing in the Crimea during our first winter, what a blessing it would have been for our troops."

REV. G. E. M. EVANS writes:— "PENRYN, CORNWALL, 8th April, 1897.

"I am very pleased with the 'Instra.' I have been caught in the rain on my bicycle two or three times, and by carrying the Warmer in my pocket have felt no chill, and caught no cold."

For full particulars, including remarkable list of unsolicited testimonials, apply

D. BLAIR AND CO.,

47, CANNON STREET, LONDON, E.C.

GOLD MEDALS

for Silk Fishing Lines and for General Exhibit.

SEND FOR A SAMPLE CARD OF THE

LINDUM FISHING LINES.

Roach	1s. 6d.	Per 100 yards.
Barbel	2s. 0d.	White or
Pike	3s. 0d.	Neutral Green.
Salmon	4s. 8d.	On Boards.

Guaranteed 8 Plait, entirely of Pure Silk, and to be the Best, Strongest, and most Lasting Lines produced.

Trout, Jack, Roach, and Bottom Fishing Rods and Tackle of Best Quality at Lowest Possible Prices.

The "Lindum" Roach Rod.—Cane Balanced Handle, Greenheart Top, Case, &c., 7/6. The Lightest and Best Rod made. Finest 6X drawn gut Roach Tackle.

The "Lindum" Pike Rod.—Greenheart Throughout, Cane Balanced Handle, Large Bronzed Guard Rings, Bickerdyke Top-ring Spinning Button, Case, &c., 10/6.

Centre Pin Reels, from 4/9.

M. BARNES, Fishing Tackle Maker, **1, St. Swithin's Square, Lincoln.**

Seaside Watering Places.

A Description of the Holiday Resorts on the Coasts of England and Wales, the Channel Islands, and the Isle of Man, giving full particulars of them and their attractions, and all information likely to assist persons in selecting places in which to spend their Holidays according to their individual tastes. Illustrated. Eighth Edition.

In Cloth Price 2s. 6d., by post 2s. 10d.

LONDON: L. UPCOTT GILL, 170, STRAND, W.C.

Digitized by Google

ALFRED & SON, LIMITED.

By Special Appointment to

His Royal Highness the Duke of Edinburgh, K.G.

MANUFACTURERS OF EVERY DESCRIPTION OF

FISHING-RODS AND TACKLE,

For All Parts of the World.

ALFRED'S SPECIAL GUINEA FLY ROD.

Original Makers of the "ALFRED" Special Whole-Cane Guinea Punt Rod.

ALFRED'S SPLIT CANE FLY RODS.

Speciality: Gut Casts, Extra Long and Fine Undrawn Natura Gut.

Salmon, Grilse, Trout, and Grayling Flie in Stock and Tied to Pattern.

Artificial Baits of Every Description for Sea and River Fishing.

Foreign and Country Orders must Enclose Remittance.

Catalogues Free for One Stamp.

ONLY ADDRESS:

20, Moorgate St. (near the Bank), E.C.

Digitized by Google

Book of the All-Round Angler.

A Comprehensive Treatise on Angling in both Fresh and Salt Water. In Four Divisions as named below. With over 220 Engravings.

By JOHN BICKERDYKE.

In cloth, price 5s. 6d., by post 5s. 10d.

Angling for Coarse Fish.

Bottom Fishing, according to the Methods in use on the Thames, Trent, Norfolk Broads, and Elsewhere. Illustrated.

In paper, price 1s., by post 1s. 2d.

Angling for Pike.

The most approved Methods of Fishing for Pike or Jack. New Edition, revised and enlarged. Profusely Illustrated.

In paper, price 1s., by post 1s. 2d.; cloth, 2s. (uncut), by post 2s. 3d.

Angling for Game Fish.

The Various Methods of Fishing for Salmon; Moorland, Chalk-stream, and Thames Trout; Grayling and Char. Well Illustrated.

In paper, price 1s. 6d., by post 1s. 9d.

Angling in Salt Water.

Sea Fishing with Rod and Line, from the Shore, Piers, Jetties, Rocks, and from Boats; together with Some Account of Hand-Lining. Over 50 Engravings.

In paper, price 1s., by post 1s. 2d.; cloth 2s. (uncut), by post 2s. 3d.

The Practical Fisherman.

Dealing with the Natural History, the Legendary Lore, the Capture of British Fresh-Water Fish, and Tackle and Tackle-making.

By J. H. KEENE.

In cloth gilt, price 7s. 6d., by post 7s. 10d.

Sea-Fishing for Amateurs.

Practical Instructions to Visitors at Seaside Places for Catching Sea-Fish from Pier-heads, Shore, or Boats, principally by means of Hand-Lines, with a very useful List of Fishing Stations, the Fish to be caught there, and the Best Seasons. Illustrated.

By FRANK HUDSON.

In paper, price 1s., by post 1s. 2d.

Sea-Fishing on the English Coast.

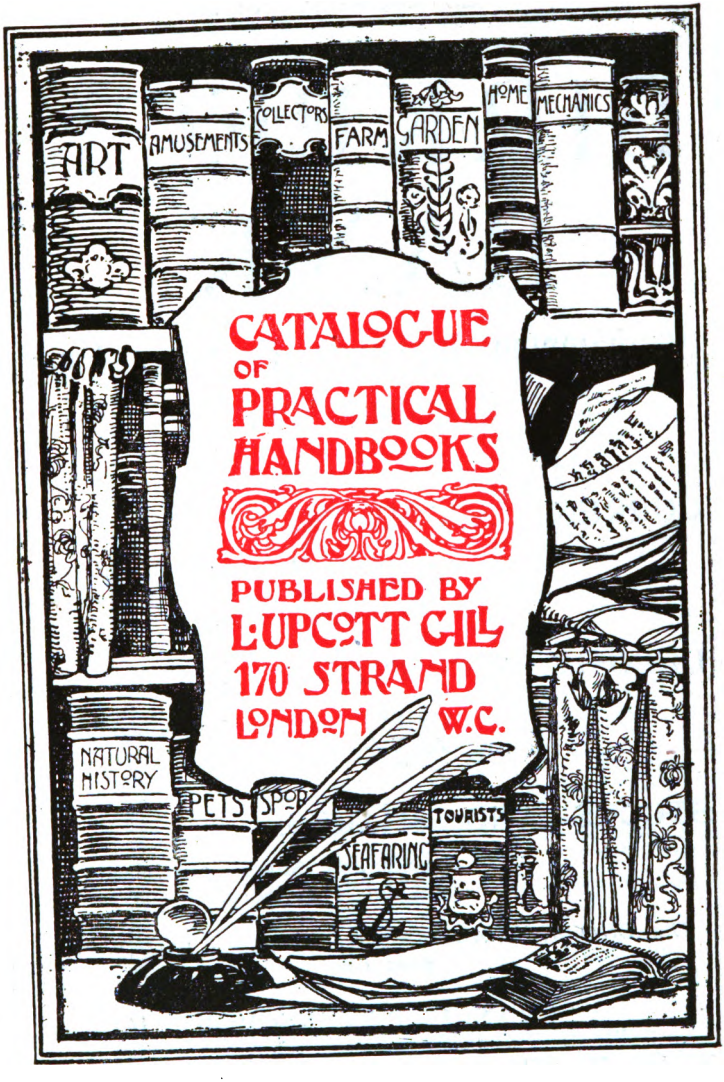
The Art of Making and Using Sea-Tackle, with a full account of the methods in vogue during each month of the year, and a Detailed Guide for Sea-Fishermen to all the most Popular Watering Places on the English Coast. Illustrated.

By F. G. AFLALO.

In cloth gilt, price 2s. 6d., by post 2s. 9d.

LONDON: L. UPCOTT GILL, 170, STRAND, W.C.

Digitized by Google



Digitized by Google

ESTABLISHED 1851.

BIRKBECK BANK,

Southampton Buildings, Chancery Lane, London, W.C.

CURRENT ACCOUNTS.

2% on the minimum monthly balances, when not drawn below £100.

DEPOSIT ACCOUNTS.

2½% on Deposits, repayable on demand.

STOCKS AND SHARES.

Stocks and Shares purchased and sold for customers.

The BIRKBECK ALMANACK, with full particulars, post free.

FRANCIS RAVENSCROFT, *Manager.*

Telephone: No. 5 HOLBORN.
Telegraphic Address: "BIRKBECK, LONDON."

Digitized by Google

DR. J. COLLIS BROWNE'S CHLORODYNE

ORIGINAL AND ONLY GENUINE

COUGHS, COLDS, ASTHMA, BRONCHITIS.

DR. J. COLLIS BROWNE'S CHLORODYNE.—DR. J. C. BROWNE (late Army Medical Staff) DISCOVERED a REMEDY, to denote which he coined the word CHLORODYNE. Dr. Browne is the SOLE INVENTOR, and, as the composition of Chlorodyne cannot possibly be discovered by Analysis (organic substances defying elimination), and since the formula has never been published, it is evident that any statement to the effect that a compound is identical with Dr. Browne's Chlorodyne *must be false*.

This caution is necessary, as many persons deceive purchasers by false representations.

IS THE GREAT SPECIFIC FOR

CHOLERA, DIARRHŒA, DYSENTERY.

GENERAL BOARD of HEALTH, London, REPORT that it acts as a CHARM, one dose generally sufficient.

Dr. GIBBON, Army Medical Staff, Calcutta, states: "TWO DOSES COMPLETELY CURED ME of DIARRHŒA."

DR. J. COLLIS BROWNE'S CHLORODYNE.—Vice-Chancellor Sir W. PAGE WOOD stated publicly in Court that Dr. J. COLLIS BROWNE was UNDOUBTEDLY the INVENTOR of CHLORODYNE, that the whole story of the defendant Freeman was deliberately untrue, and he regretted to say it had been sworn to.—See *The Times*, July 13th, 1864.

DR. J. COLLIS BROWNE'S CHLORODYNE is the TRUE PALLIATIVE in NEURALGIA, GOUT, CANCER, TOOTHACHE, RHEUMATISM.

DR. J. COLLIS BROWNE'S CHLORODYNE is a liquid medicine which assuages PAIN of EVERY KIND, affords a calm refreshing sleep WITHOUT HEADACHE, and INVIGORATES the nervous system when exhausted.

DR. J. COLLIS BROWNE'S CHLORODYNE rapidly cuts short all attacks of EPILEPSY, SPASMS, COLIC, PALPITATION, HYSTERIA.

IMPORTANT CAUTION.

The IMMENSE SALE of this REMEDY has given rise to many UNSCRUPULOUS IMITATIONS. Be careful to observe Trade Mark.

Of all Chemists, 1/1½, 2/9, and 4/6.

SOLE MANUFACTURERS,
J. T. DAVENPORT,
33, Great Russell St., W.C.

The *ILLUSTRATED LONDON NEWS* of September 28, 1895, says:—

"If I were asked which single medicine I should prefer to take abroad with me, as likely to be most generally useful, to the exclusion of all others, I should say CHLORODYNE. I never travel without it, and its general applicability to the relief of a large number of simple ailments forms its best recommendation."

Digitized by Google

Treloar's Linoleum

Sold in Rolls at the following Low Prices, viz.:—

	£	s.	d.
1 roll, 6ft. wide, containing 50 square yards	3	2	6
½ „ „ 25 „	1	11	6
¼ „ „ 12½ „	0	16	0

Samples of the material in various Patterns will be sent on application to TRELOAR & SONS, Ludgate Hill.

Treloar's Linoleum

Is Well Seasoned and therefore Wears Well.

CATALOGUES AND ESTIMATES FOR ALL FLOOR COVERINGS FREE.

A Copy of "LUDGATE HILL, PAST AND PRESENT," by Sir W. P. TRELOAR, will be forwarded without charge upon receipt of 3d. in stamps—cost of postage.

TRELOAR & SONS,

Ludgate Hill, London.

Telegraphic Address:
"TRELOAR, LONDON."

Telephone Number:
5044 BANK.

ESTABLISHED 1832. **ELEVEN PRIZE MEDALS.**

Digitized by Google

EDINBURGH AND LONDON.

Should be in every Office and Private Library. The Maps, besides showing all the Railways and Canals, answer quite well for ordinary reference.

W. & A. K. JOHNSTON'S

RAILWAY AND CANAL MAP OF ENGLAND AND WALES.

FOURTH EDITION.

Showing each Railway System in a particular Colour and Marking, and the Canals in a distinctive Colour. Size 50in. by 42in. Price, in Two Sheets, 7s. 6d.; on Cloth, Rollers, and Varnished, 10s.; on Cloth to fold in Titled Cloth Case, 10s.

W. & A. K. JOHNSTON'S

RAILWAY AND CANAL MAP OF SCOTLAND.

FIFTH EDITION.

Showing each Railway System in a particular Colour, and Canals. Size 35½in. by 29½in. Price, on Cloth, Rollers, Varnished, or on Cloth to fold in Cloth Case, 5s.

LATELY PUBLISHED.

RAILWAY AND CANAL MAP OF IRELAND.

Giving the various Lines in different Colours, and showing all the Passenger Stations and Canals. Size 35½in. by 29½in. Price, on Cloth, cut to fold in Case, or on Cloth, Rollers, and Varnished, 5s.

The above Maps are sent Carriage Paid to any address in United Kingdom on receipt of the Published Price.

W. & A. K. JOHNSTON, Ltd.,

(ESTABLISHED 1825),

Geographical, Educational and General Publishers,

EDINA WORKS, EASTER ROAD, AND 20, SOUTH SAINT ANDREW STREET, EDINBURGH;
7, PATERNOSTER SQUARE, LONDON, E.C.

PATENT "AIR CUSHION"

John Bellamy.

Rubber Stamps

OF EVERY DESCRIPTION MADE TO ORDER.

The ONLY Patented Stamps which will produce perfect impressions upon any surface, even or uneven, hard or yielding.

NO OTHER STAMP WILL DO THAT!

Write for Terms of Agency, FREE SAMPLES, AND CATALOGUE, TO

M. Lindner, PATENTEE & MANUFACTURER, **170, Fleet St., London, E.C.**

Telegrams: "LINDNER, LONDON."

Digitized by Google

Collectors of

SPORTING BOOKS & SPORTING PRINTS

Will find my Catalogue of Great Utility.

SENT POST FREE ANYWHERE.

They are frequently issued, and always contain a Choice Selection of Books by Surtees, Scrope, Egan, "Nimrod" (Apperley), and many other notable writers upon one or other subject, or generally interesting to lovers of any form of Field Sports, Athletics, Games, and other Recreations, Indoor or Outdoor, with, it is believed, the Largest Variety in the World, under one roof, of Sporting Prints, coloured and plain, by Aiken, Rowlandson, Cruikshank, Howitt, Leech, "Phiz," Scott, and innumerable other attractive artists.

Buyers of other branches of literature are catered for with corresponding diligence, and equally favourable opportunities of constant acquisitions.

LISTS OF WANTS

Customers may favour me with will be always kept before me, and attended to with the most sedulous care.

BOOKS PURCHASED TO ANY EXTENT.

A single book is not beneath my notice; an extensive and costly library will be as easily negotiated, and upon the most liberal terms.

INVARIABLY IMMEDIATE CASH IN EVERY TRANSACTION.

WALTER T. SPENCER,

27, NEW OXFORD STREET

(Near the British Museum),

Cable and Telegraphic Address: "PHIZ, LONDON."

LONDON, W.C.

THREE GOOD THINGS.

1. THE CENTURY INVESTMENT PLAN of Life Insurance has no superior. See it before completing elsewhere.

2. THE CENTURY SYSTEM OF COMBINED house purchase and Life Insurance should be studied by every rent paying tenant.

3. THE CENTURY METHOD OF INSURANCE against ALL Sickness and ALL Accidents was specially designed to meet the needs of Professional and Business men. £1 to £15 per week. With or without return of all premiums.

THE CENTURY INSURANCE CO., LTD.

London: 35, MOORGATE STREET, E.C.

Edinburgh (Head Office): 24, YORK PLACE.

ACTIVE AGENTS WANTED.

HENRY BROWN, General Manager.

Digitized by Google

INDEX

To the Practical Handbooks published by L. Upcott Gill, 170, Strand, London, and Chas. Scribner's Sons, New York.

ART. PAGE

Churches, Old English 11
Designing, Harmonic 12
Lace, Hand-Made 15
Old Violins 20
Paper Work, Ornamental 16
Painting, Decorative 16
Poker Work 17

AMUSEMENTS.

Cards 17
Card Games 10, 11, 13, 17, 19, 20
Conjuring 11, 12, 19
Entertainments 10, 13, 19, 20
Fortune Telling 13
Games, General 14
Magic Lanterns 16
Palmistry 16
Photography 17
Pool 17
Vamping 20

COLLECTING.

Autographs 9
Butterflies 10, 11
Coins 11
Dragonflies 10
Engravings 13
Handwriting 15
Hawk Moths 15
Painters 16
Postage Stamps 18
Postmarks 18
Pottery & Porcelain 18
Violins 20
War Medals 20

FARMING.

Goats 14
Horses 15
Pigs 17
Poultry 15, 18
Sheep 19
Stock Records 10, 17, 19, 20

GARDENING. PAGE

Begonias 10
Book of Gardening 14
Bulbs 10
Cactus 11
Carnations 11
Chrysanthemums 11
Cucumbers 12
Dictionary of Gardening 14
Ferns 13
Fruit 14, 20
Gardening in Egypt 14
Grapes 14
Greenhouse Management 14, 15
Home Gardening 14
Mushrooms 16
Open-Air Gardening 14
Orchids 16
Perennials 15
Roses 18
Tomatoes 20
Vegetables 20

HOME.

Cookery 9, 12, 13
Lace, Hand-Made 15
Medicine 15
Millinery 16
Needlework 13, 16

MECHANICS.

Bookbinding 10
Cane Basket Work 11
Firework Making 13
Fretwork 14
Marqueterie 14, 16
Metal Working 10, 19, 21
Model Yachts 16
Ticket Writing 21
Turning 20
Wood Working 10, 14, 16, 17, 20, 21

NATURAL HISTORY. PAGE

Aquaria 9
Insects 9, 10, 11, 15
Taxidermy 20
Vivarium 20

PET-KEEPING.

Birds 10, 11, 15, 17, 21
Cats 11
Dogs 12, 13, 14, 15, 19, 20
Guinea Pigs 15
Mice 16
Pheasants 17
Pigeons 17
Rabbits 18

SPORTING.

Angling 9, 19
Cycling 12
Ferreting 13
Game Preserving 14
Sailing 10, 15, 18, 19
Skating 19
Trapping 20
Wildfowling 21
Wild Sports 21

SEAFARING.

Boat Sailing 10
Sailing Tours 18, 19
Sea Life 19
Sea Terms 19
Solent Guide 18
Yachting Yarns 15

TOURING.

Friesland Meres 14
Inland Watering Places 15
Route Map 12
Seaside Watering Places 19
Welsh Mountaineering 16

208 C 10/01.

Digitized by Google

CROSBY LOCKWOOD & SON'S
PRACTICAL HANDBOOKS.

THE PROSPECTOR'S HANDBOOK. A Guide for the Prospector and Traveller in search of Metal-Bearing and other Valuable Minerals. By J. W. ANDERSON, M.A. Crown 8vo, 3/6, cloth.

FIELD TESTING FOR GOLD AND SILVER. A Practical Manual for Prospectors and Miners. By W. H. MERRITT, M.N.E.Inst.M.E. With Photographic Plates and other Illustrations. Foolscap 8vo, leather, 5/- net.

PRACTICAL SURVEYING. A Text-Book for Students preparing for Examinations or for Survey Work in the Colonies. By G. W. USILL, A.M.I.C.E. Crown 8vo, 7/6, cloth.

HANDY BOOKS FOR HANDICRAFTS. By P. N. HASLUCK.

METAL TURNING, 1/-.
WOOD TURNING, 1/-.
WATCH JOBBING, 1/-.
CLOCK JOBBING, 1/-.
MECHANICS' WORKSHOP, 1/-.
CABINET MAKING, 1/-.
PATTERN MAKING, 1/-.
WOODWORKING, 1/-.
MODEL ENGINE CONSTRUCTION, 1/-.

THE SHEET-METAL WORKER'S GUIDE. A Practical Handbook for Tinsmiths, Coppersmiths, and Zincworkers. By W. J. E. CRANE. 1/6, cloth.

THE LOCOMOTIVE ENGINE AND ITS DEVELOPMENT. A Popular Treatise on the Gradual Improvements made in Railway Engines. By C. E. STRETTON, C.E. With 120 Illustrations. Crown 8vo, 3/6, cloth.

LATHE WORK. A Practical Treatise on the Tools, Appliances, and Processes employed in the Art of Turning. By P. N. HASLUCK. Crown 8vo, 5/-, cloth.

ELECTRIC LIGHTING (ELEMENTARY PRINCIPLES OF). By ALAN A. CAMPBELL SWINTON, Associate I.E.E. Third Edition, Enlarged and Revised. With 70 Illustrations. Crown 8vo, 1/6, cloth.

HOW TO MAKE A DYNAMO. Containing Instructions for Constructing a Small Dynamo to Produce the Electric Light. By A. CROFTS. Crown 8vo, 2/-, cloth.

ELECTRIC LIGHT FOR COUNTRY HOUSES. The Erection and Running of Small Installations, with Particulars of the Cost of Plant and Working. By J. H. KNIGHT. Crown 8vo, 1/-.

ELECTRIC LIGHT FITTING. A Handbook for Working Electrical Engineers, embodying Practical Notes on Installation Management. By J. W. UNGLEY. Crown 8vo, 5/-, cloth.

PRACTICAL BUILDING CONSTRUCTION. A Handbook for Students Preparing for Examinations and Book of Reference for Persons Engaged in Building. By JAMES B. ALLEN, Lecturer on Building Construction, Durham College of Science. Medium 8vo. 450 pages, with 1000 Illustrations, 7/6, cloth.

QUANTITIES AND MEASUREMENTS, in Bricklayers', Masons', Plasterers', Plumbers', Painters', Paperhangers', Gilders', Smiths', Carpenters', and Joiners' Work. By A. C. BEATON. 1/6, cloth.

HOUSE PAINTING, GRAINING, MARBLING, AND SIGN WRITING. With a Course of Elementary Drawing and a Collection of Useful Recipes. By ELLIS A. DAVIDSON. Crown 8vo, 5/-, cloth.

FRENCH POLISHING AND ENAMELLING. A Practical Book of Instruction, including Numerous Recipes for making Polishes, Varnishes, Glaze-Lacquers, Revivers, &c. By RICHARD BITMEAD. Crown 8vo, 1/6, cloth.

BREAD AND BISCUIT BAKER'S AND SUGAR-BOILER'S ASSISTANT. Including a Large Variety of Modern Recipes. With Remarks on the Art of Bread-Making. By ROBERT WELLS. Crown 8vo, 2/-, cloth.

☞ **COMPLETE CATALOGUES ON APPLICATION.**

London: CROSBY LOCKWOOD & SON, 7, Stationers' Hall Court, E.C.

Digitized by Google

Catalogue
of
Practical Handbooks
Published by
L. Upcott Gill, 170, Strand, London,
and
Chas. Scribner's Sons, New York.

American Dainties, and How to Prepare Them. By an AMERICAN LADY. *In paper, price* 1/-, *by post* 1/2.

Angler, Book of the All-Round. A Comprehensive Treatise on Angling in both Fresh and Salt Water. In Four Divisions as named below. By JOHN BICKERDYKE. With over 220 Engravings. *In cloth gilt, price* 5/6, *by post* 5/10.

Angling for Coarse Fish. Bottom Fishing, according to the Methods in use on the Thames, Trent, Norfolk Broads, and elsewhere. New Edition, Revised and Enlarged. Illustrated. *In paper, price* 1/-, *by post* 1/2.

Angling for Pike. The most approved methods of Fishing for Pike or Jack. New Edition, Revised and Enlarged. Profusely illustrated. *In paper, price* 1/-, *by post* 1/2.

Angling for Game Fish. The Various Methods of Fishing for Salmon; Moorland, Chalk-stream, and Thames Trout; Grayling and Char. New Edition. Well illustrated. *In paper, price* 1/6, *by post* 1/9.

Angling in Salt Water. Sea Fishing with Rod and Line, from the Shore, Piers, Jetties, Rocks, and from Boats; together with Some Account of Hand-Lining. Over 50 Engravings. *In paper, price* 1/-, *by post* 1/2.

Angler, The Modern. A Practical Handbook on all Kinds of Angling, both Fresh Water and Sea. By "OTTER." Well illustrated. New Edition. *In cloth gilt, price* 2/6, *by post* 2/9.

Aquaria, Book of. A Practical Guide to the Construction, Arrangement, and Management of Freshwater and Marine Aquaria; containing Full Information as to the Plants, Weeds, Fish, Molluscs, Insects, &c., How and Where to Obtain Them, and How to Keep Them in Health. By REV. GREGORY C. BATEMAN, A.K.C., and REGINALD A. R. BENNETT, B.A. Illustrated. *In cloth gilt, price* 5/6, *by post* 5/10.

Aquaria, Freshwater: Their Construction, Arrangement, Stocking, and Management. By REV. G. C. BATEMAN, A.K.C. Fully Illustrated. *In cloth gilt, price* 3/6, *by post* 3/10.

Aquaria, Marine: Their Construction, Arrangement, and Management. By R. A. R. BENNETT, B.A. Fully Illustrated. *In cloth gilt, price* 2/6, *by post* 2/9.

Autograph Collecting: A Practical Manual for Amateurs and Historical Students, containing ample information on the Selection and Arrangement of Autographs, the Detection of Forged Specimens, &c., &c., to which are added numerous Facsimiles for Study and Reference, and an extensive Valuation Table of Autographs worth Collecting. By HENRY T. SCOTT, M.D., L.R.C.P., &c. *In leatherette gilt, price* 7/6 *net, by post* 7/10.

Bazaars and Fancy Fairs: Their Organization and Management. A Secretary's *Vade Mecum*. By JOHN MUIR. *In paper, price* 1/-, *by post* 1/2.

Bee-Keeping, Book of. A very practical and Complete Manual on the Proper Management of Bees, especially written for Beginners and Amateurs who have but a few Hives. By W. B. WEBSTER, First-class Expert, B.B.K.A. Fully illustrated. *In paper, price* 1/-, *by post* 1/2; *cloth* 1/6, *by post* 1/8.

Digitized by Google

Bee, The Anatomy, Physiology, and Floral Relations of the Hive. By the late FRANK R. CHESHIRE, F.L.S., F.R.M.S., formerly lecturer on Apiculture at South Kensington; Author of "Diagrams on the Anatomy of the Honey Bee." With numerous Exquisite Illustrations of the Internal and External Structure of the Bee, and its Application to Plant Fertilisation, Expressly Drawn for this Work by the Author. *In cloth gilt, price* 7/6, *by post* 7/10.

Begonia Culture, for Amateurs and Professionals. Containing Full Directions for the Successful Cultivation of the Begonia, under Glass and in the Open Air. By B. C. RAVENSCROFT. New Edition, Revised and Enlarged. Illustrated. *In paper, price* 1/-, *by post* 1/2.

Bent Iron Work: A Practical Manual of Instruction for Amateurs in the Art and Craft of Making and Ornamenting Light Articles in imitation of the beautiful Mediæval and Italian Wrought Iron Work. By F. J. ERSKINE. Illustrated. *In paper, price* 1/-, *by post* 1/2.

Birds, British, for the Cages and Aviaries. A Handbook relating to all British Birds which may be kept in Confinement. Illustrated. By DR. W. T. GREENE. *In cloth gilt, price* 3/6, *by post* 3/9.

Boat Building and Sailing, Practical. Containing Full Instructions for Designing and Building Punts, Skiffs, Canoes, Sailing Boats, &c. Particulars of the most suitable Sailing Boats and Yachts for Amateurs, and Instructions for their Proper Handling. Fully Illustrated with Designs and Working Diagrams. By ADRIAN NEISON, C.E., DIXON KEMP, A.I.N.A., and G. CHRISTOPHER DAVIES. *In one vol., cloth gilt, price* 7/6, *by post* 7/10.

Boat Building for Amateurs, Practical. Containing Full Instructions for Designing and Building Punts, Skiffs, Canoes, Sailing Boats, &c. Fully Illustrated with Working Diagrams. By ADRIAN NEISON, C.E. Second Edition, Revised and Enlarged by DIXON KEMP, Author of "A Manual of Yacht and Boat Sailing," &c. *In cloth gilt, price* 2/6, *by post* 2/9.

Boat Sailing for Amateurs, Practical. Containing Particulars of the most Suitable Sailing Boats and Yachts for Amateurs, and Instructions for their Proper Handling, &c. Illustrated with numerous Diagrams. By G. CHRISTOPHER DAVIES. Second Edition, Revised and Enlarged, and with several New Plans of Yachts. *In cloth gilt, price* 5/-, *by post* 5/4.

Bookbinding for Amateurs: Being descriptions of the various Tools and Appliances Required, and Minute Instructions for their Effective Use. By W. J. E. CRANE. Illustrated with 156 Engravings. *In cloth gilt, price* 2/6, *by post* 2/9.

Breeders' and Exhibitors' Record, for the Registration of Particulars concerning Pedigree Stock of every Description. By W. K. TAUNTON. In 3 Parts. Part I., The Pedigree Record. Part II., The Stud Record. Part III., The Show Record. *In cloth gilt, price each Part* 2/6, *or the set* 6/-, *by post* 6/6.

Bridge Whist: Its Whys and Wherefores. The Game taught by *Reason* instead of by Rule, on the same popular lines as "Scientific Whist" and "Solo Whist," and by the same Author, C. J. MELROSE. With Illustrative Hands in Colours. *In cloth gilt, price* 3/6, *by post* 3/10; *in half leather, gilt top,* 5/6 *net, by post* 6/-.

British Dragonflies. Being an Exhaustive Treatise on our Native Odonata; Their Collection, Classification, and Preservation. By W. J. LUCAS, B.A. Very fully Illustrated with 27 Plates, Illustrating 39 Species, exquisitely printed in Colour, and numerous Black-and-White Engravings. *In cloth gilt, price* 31/6 *net, by post* 32/-.

Bulb Culture, Popular. A Practical and Handy Guide to the Successful Cultivation of Bulbous Plants, both in the Open and Under Glass. By W. D. DRURY. New Edition. Fully illustrated. *In paper, price* 1/-, *by post* 1/2.

Bunkum Entertainments: A Collection of Original Laughable Skits on Conjuring, Physiognomy, Juggling, Performing Fleas, Waxworks, Panorama, Phrenology, Phonograph, Second Sight, Lightning Calculators, Ventriloquism, Spiritualism, &c., to which are added Humorous Sketches, Whimsical Recitals, and Drawing-room Comedies. By ROBERT GANTHONY. Illustrated. *In cloth, price* 2/6, *by post* 2/8.

Butterflies, The Book of British: A Practical Manual for Collectors and Naturalists. Splendidly illustrated throughout with very accurate Engravings of the Caterpillars, Chrysalids, and Butterflies, both upper and under sides, from drawings by the Author or direct from Nature. By W. J. LUCAS, B.A. *In cloth gilt, price* 3/6, *by post* 3/9.

Digitized by Google

Butterfly and Moth Collecting: Where to Search, and What to Do. By G. E. SIMMS. Illustrated. *In paper, price 1/-, by post 1/2.*

Cabinet Making for Amateurs. Being clear Directions How to Construct many Useful Articles, such as Brackets, Sideboard, Tables, Cupboards, and other Furniture. Illustrated. *In cloth gilt, price 2/6, by post 2/9.*

Cactus Culture for Amateurs: Being Descriptions of the various Cactuses grown in this country; with Full and Practical Instructions for their Successful Cultivation. By W. WATSON, Assistant Curator of the Royal Botanic Gardens, Kew. New Edition. Profusely illustrated. *In cloth gilt, price 5/- net, by post 5/4.*

Cage Birds, Diseases of: Their Causes, Symptoms, and Treatment. A Handbook for everyone who keeps a Bird. By DR. W. T. GREENE, F.Z.S. *In paper, price 1/-, by post 1/2.*

Cage Birds, Notes on. Second Series. Being Practical Hints on the Management of British and Foreign Cage Birds, Hybrids, and Canaries. By various Fanciers. Edited by DR. W. T. GREENE. *In cloth gilt, price 6/-, by post 6/6.*

Canary Book. The Breeding, Rearing, and Management of all Varieties of Canaries and Canary Mules, and all other matters connected with this Fancy. By ROBERT L. WALLACE. Third Edition. *In cloth gilt, price 5/-, by post 5/4; with COLOURED PLATES, 6/6, by post 6/10.*

General Management of Canaries. Cages and Cage-making, Breeding, Managing, Mule Breeding, Diseases and their Treatment, Moulting, Pests, &c. Illustrated. *In cloth gilt, price 2/6, by post 2/9.*

Exhibition Canaries. Full Particulars of all the different Varieties, their Points of Excellence, Preparing Birds for Exhibition, Formation and Management of Canary Societies and Exhibitions. Illustrated. *In cloth gilt price 2/6, by post 2/9.*

Cane Basket Work: A Practical Manual on Weaving Useful and Fancy Baskets. By ANNIE FIRTH. Series I. and II. Illustrated. *In cloth gilt, price 1/6, by post 1/8 each.*

Card Tricks. By HOWARD THURSTON. A Manual on the Art of Conjuring with Cards, including many hitherto unpublished Novel and Unique Experiments, as presented by the Author in the Leading Theatres of the World. Illustrated. *In paper 2/6 net, by post 2/8; in cloth, 3/6 net, by post 3/9.*

Card Tricks, Book of, for Drawing-room and Stage Entertainments by Amateurs; with an exposure of Tricks as practised by Card Sharpers and Swindlers. Numerous Illustrations. By PROF. R. KUNARD. *In illustrated wrapper, price 2/6, by post 2/9.*

Carnation Culture, for Amateurs. The Culture of Carnations and Picotees of all Classes in the Open Ground and in Pots. By B. C. RAVENSCROFT. Illustrated. *In paper, price 1/-, by post 1/2.*

Cats, Domestic and Fancy. A Practical Treatise on their Varieties, Breeding, Management, and Diseases. By JOHN JENNINGS. Illustrated. *In paper, price 1/-, by post 1/2.*

Chrysanthemum Culture, for Amateurs and Professionals. Containing Full Directions for the Successful Cultivation of the Chrysanthemum for Exhibition and the Market. By B. C. RAVENSCROFT. Third Edition. Illustrated *In paper, price 1/-, by post 1/2.*

Chrysanthemum, The Show, and Its Cultivation. By C. SCOTT, of the Sheffield Chrysanthemum Society. *In paper, price 6d., by post 7d.*

Churches, Old English: Their Architecture, Furniture, Accessories, Decorations, Monuments, &c. By GEO. CLINCH, F.G.S. Magnificently Illustrated. *In cloth gilt, price 6/6 net, by post 6/9.*

Coins, a Guide to English Pattern, in Gold, Silver, Copper, and Pewter, from Edward I. to Victoria, with their Value. By the REV. G. F. CROWTHER, M.A. Illustrated. *In silver cloth, with gilt facsimiles of Coins, price 5/-, by post 5/3.*

Coins of Great Britain and Ireland, a Guide to the, in Gold, Silver, and Copper, from the Earliest Period to the Present Time, with their Value. By the late COLONEL W. STEWART THORBURN. Third Edition. Revised and Enlarged by H. A. GRUEBER, F.S.A. Illustrated. *In cloth gilt, price 10/6 net, by post 10/10.*

Digitized by Google

Cold Meat Cookery. A Handy Guide to making really tasty and much appreciated Dishes from Cold Meat. By MRS. J. E. DAVIDSON. *In paper, price 1/-, by post 1/2.*

Collie Stud Book. Edited by HUGH DALZIEL. *In cloth gilt, price 3/6 each, by post 3/9 each.*

Vol. I., containing Pedigrees of 1308 of the best-known Dogs traced to their most remote known ancestors; Show Record to Feb., 1890, &c.

Vol. II. Pedigrees of 795 Dogs, Show Record, &c.

Vol. III. Pedigrees of 786 Dogs, Show Record, &c.

Conjuring, Book of Modern. A Practical Guide to Drawing-room and Stage Magic for Amateurs. By PROFESSOR R. KUNARD. Illustrated. *In illustrated wrapper, price 2/6, by post 2/8.*

Conjuring and Card Tricks, Book of. By PROF. R. KUNARD. Being "The Book of Modern Conjuring" and "The Book of Card Tricks" bound in one vol. *Cloth gilt, price 5/-, by post 5/4.*

Conjuring for Amateurs. A Practical Handbook on How to Perform a Number of Amusing Tricks. By PROF. ELLIS STANYON. *In paper, price 1/-, by post 1/2.*

Conjuring with Cards: Being Tricks with Cards, and How to Perform Them. By PROF ELLIS STANYON. Illustrated, and in Coloured Wrapper. *Price 1/-, by post 1/2.*

Cookery, The Encyclopædia of Practical. A complete Dictionary of all pertaining to the Art of Cookery and Table Service. Edited by THEO. FRANCIS GARRETT, assisted by eminent Chefs de Cuisine and Confectioners. Profusely Illustrated with Coloured Plates and Engravings by HAROLD FURNESS, GEO. CRUIKSHANK, W. MUNN ANDREW, and others. *In demy 4to. half morocco, cushion edges, 2 vols., price £3 3/-; 4 vols., £3/13/6.*

Cucumber Culture for Amateurs. Including also Melons, Vegetable Marrows and Gourds. Illustrated. By W. J. MAY. *In paper, price 1/-, by post 1/2.*

Cyclist's Route Map of England and Wales. Shows clearly all the Main, and most of the Cross, Roads, Railroads, and the Distances between the Chief Towns, as well as the Mileage from London. In addition to this, Routes of *Thirty of the Most Interesting Tours* are printed in red. Fourth Edition, thoroughly revised. The map is printed on specially prepared vellum paper, and is the fullest, handiest, and best up-to-date tourist's map in the market. *In cloth, price 1/-, by post 1/2.*

Dainties, English and Foreign, and How to Prepare Them. By MRS. DAVIDSON. *In paper, price 1/-, by post 1/2.*

Designing, Harmonic and Keyboard. Explaining a System whereby an endless Variety of Most Beautiful Designs suited to numberless Manufactures may be obtained by Unskilled Persons from any Printed Music. Illustrated by Numerous Explanatory Diagrams and Illustrative Examples. By C. H. WILKINSON. *Demy 4to, cloth gilt, price £3 3/- net, by post £3/3/8.*

Dogs, Breaking and Training: Being Concise Directions for the proper education of Dogs, both for the Field and for Companions. Second Edition. By "PATHFINDER." With Chapters by HUGH DALZIEL. Illustrated. *In cloth gilt, price 6/6, by post 6/10.*

Dogs, British, Ancient and Modern: Their Varieties, History, and Characteristics. By HUGH DALZIEL, assisted by eminent Fanciers. Beautifully Illustrated with COLOURED PLATES and full-page Engravings of Dogs of the Day, with numerous smaller illustrations in the text. This is the fullest work on the various breeds of dogs kept in England. In three volumes, *demy 8vo, cloth gilt, price 10/6 each, by post 11/- each.*

Vol. I. Dogs Used in Field Sports.

Vol. III. Pointers, Setters, Retrievers, Spaniels, and Their Management. A Complete Treatise on all Matters relating to the Proper Management of Dogs whether kept for the Show Bench, for the Field, or for Companions.

Vol. II. is out of print, but Vols. I. and III. can still be had as above.

Digitized by Google

Dogs, Diseases of: Their Causes, Symptoms, and Treatment; Modes of Administering Medicines; Treatment in cases of Poisoning, &c. For the use of Amateurs. By HUGH DALZIEL. Fourth Edition. Entirely Re-written and brought up to date. *In paper, price 1/-, by post 1/2; in cloth gilt, 2/-, by post 2/3.*

Dog-Keeping, Popular: Being a Handy Guide to the General Management and Training of all Kinds of Dogs for Companions and Pets. By J. MAXTEE. Illustrated. *In paper, price 1/-, by post 1/2.*

Egg Dainties. How to Cook Eggs. One Hundred and Fifty Different Ways, English and Foreign. *In paper price 1/-, by post 1/2.*

Engravings and their Value. Containing a Dictionary of all the Greatest Engravers and their Works. By J. H. SLATER. Third Edition. Revised with an appendix and illustrations, and with latest Prices at Auction, &c. *In cloth gilt, price 15/- net, by post 15/5.*

Entertainments, Amateur, for Charitable and other Objects: How to Organise and Work them with Profit and Success. By ROBERT GANTHONY. *In paper, price 1/-, by post 1/2.*

Fancy Work Series, Artistic. A Series of Illustrated Manuals on Artistic and Popular Fancy Work of various kinds. Each number is complete in itself, and issued at the uniform *price of 6d., by post 7d.* Now ready—(1) MACRAMÉ LACE (Second Edition); (2) PATCHWORK; (3) TATTING; (4) CREWEL WORK; (5) APPLIQUÉ; (6) FANCY NETTING.

Feathered Friends, Old and New. Being the Experience of many years' Observations of the Habits of British and Foreign Cage Birds. By DR. W. T. GREENE. Illustrated. *In cloth gilt, price 5/-, by post 5/4.*

Ferns, The Book of Choice: for the Garden, Conservatory, and Stove. Describing the best and most striking Ferns and Selaginellas, and giving explicit directions for their Cultivation, the formation of Rockeries, the arrangement of Ferneries, &c. By GEORGE SCHNEIDER. With numerous Coloured Plates and other Illustrations. *In 3 vols., large post 4to. Cloth gilt, price £3 3/- net, by post £3 5/-.*

Ferns, Choice British. Descriptive of the most beautiful Variations from the common forms, and their Culture. By C. T. DRUERY, F.L.S. Very accurate Plates, and other Illustrations. *In cloth gilt, price 2/6, by post 2/9.*

Ferrets and Ferreting. Containing Instructions for the Breeding, Management and Working of Ferrets. Second Edition. Re-written and greatly Enlarged. Illustrated. *In paper, price 6d., by post 7d.*

Fertility of Eggs Certificate. These are Forms of Guarantee given by the Sellers to the Buyers of Eggs for Hatching, undertaking to refund value of any unfertile eggs, or to replace them with good ones. Very valuable to sellers of eggs, as they induce purchases. *In books, with counterfoils, price 6d., by post 7d.*

Firework Making for Amateurs. A complete, accurate, and easily understood work on making Simple and High-class Fireworks. By DR. W. H. BROWNE, M.A. *In coloured wrapper, price 2/6, by post 2/9.*

Fish, Flesh, and Fowl. When in Season, How to Select, Cook, and Serve. By MARY BARRETT BROWN. *In paper, price 1/-, by post 1/3.*

Foreign Birds, Favourite, for Cages and Aviaries. How to Keep them in Health. By W. T. GREENE, M.A., M.D., F.L.S., &c. Fully Illustrated. *In cloth gilt, price 2/6, by post 2/9.*

Fortune Telling by Cards. Describing and Illustrating the Methods usually followed by Persons Professing to Tell Fortunes by Cards. By J. B. PRANGLEY. Illustrated. *Price 1/-, by post 1/2.*

Fox Terrier, The. Its History, Points, Breeding, Rearing, Preparing for Exhibition, and Choosing. By HUGH DALZIEL. Second Edition, Revised and brought up to date by J. MAXTEE (Author of "Popular Dog-Keeping"). Fully Illustrated. *In paper, price 1/-, by post 1/2; in cloth, with Coloured Frontispiece and several extra plates, price 2/6, by post 2/9.*

Digitized by Google

Fox Terrier Stud Book. Edited by HUGH DALZIEL. *In cloth gilt, price* 3/6 *each, by post* 3/9 *each.*

Vol. I., containing Pedigrees of over 1400 of the best-known Dogs, traced to their most remote known ancestors.

Vol. II. Pedigrees of 1544 Dogs, Show Record, &c.

Vol. III. Pedigrees of 1214 Dogs, Show Record, &c.

Vol. IV. Pedigrees of 1168 Dogs, Show Record, &c.

Vol. V. Pedigrees of 1562 Dogs, Show Record, &c.

Fretwork and Marquetry. A Practical Manual of Instructions in the Art of Fret-cutting and Marquetry Work. By D. DENNING. Profusely Illustrated. *In cloth gilt, price* 2/6, *by post* 2/9.

Friesland Meres, A Cruise on the. By ERNEST R. SUFFLING. Illustrated. *In paper, price* 1/-, *by post* 1/2.

Fruit Culture for Amateurs. An illustrated practical hand-book on the Growing of Fruits in the Open and under Glass. By S. T. WRIGHT. With Chapters on Insect and other Fruit Pests by W. D. DRURY. Second Edition. Illustrated. *In cloth gilt, price* 3/6, *by post* 3/9.

Game Preserving, Practical. Containing the fullest Directions for Rearing and Preserving both Winged and Ground Game, and Destroying Vermin; with other information of Value to the Game Preserver. By W. CARNEGIE. Illustrated. *In cloth gilt, demy 8vo, price* 10/6, *by post* 11/-.

Games, the Book of a Hundred. By MARY WHITE. These games are for Adults, and will be found extremely serviceable for Social Entertainment. They are Clearly Explained, are Ingenious, Clever, Amusing, and exceedingly Novel. *In stiff boards, price* 2/6, *by post* 2/9.

Gardening, the Book of: A Handbook of Horticulture. By well-known Specialists, including J. M. Abbott, W. G. Baker, Charles Bennett, H. J. Chapman, James Douglas, Charles Friedrich, A. Griessen, F. M. Mark, Trevor Monmouth, G. Schneider, Mortimer Thorn, J. J. Willis, and Alan Wynne. Edited by W. D. DRURY (Author of "Home Gardening," "Insects Injurious to Fruit," "Popular Bulb Culture," &c.). Very fully Illustrated. 1 *vol., demy 8vo, about* 1200*pp, price* 16/- *net, by post* 16/9.

Gardening, Dictionary of. A Practical Encyclopædia of Horticulture, for Amateurs and Professionals. Illustrated with 3150 Engravings. Edited by G. NICHOLSON, Curator of the Royal Botanic Gardens, Kew; assisted by Prof. Trail, M.D., Rev. P. W. Myles, B.A., F.L.S., W. Watson, J. Garrett, and other Specialists. *In* 5 *vols., large post 4to. Cloth gilt, price* £4, *by post* £4 2/-.

Gardening, Open-Air: The Culture of Hardy Flowers, Fruit, and Vegetables. Edited by W. D. DRURY, F.R.S. Beautifully Illustrated. *In cloth gilt, demy 8vo, price* 6/-, *by post* 6/5.

Gardening in Egypt. A Handbook of Gardening for Lower Egypt. With a Calendar of Work for the different Months of the Year. By WALTER DRAPER. *In cloth gilt, price* 3/6, *by post* 3/9.

Gardening, Home. A Manual for the Amateur, Containing Instructions for the Laying Out, Stocking, Cultivation, and Management of Small Gardens—Flower, Fruit, and Vegetable. By W. D. DRURY, F.R.H.S. Illustrated. *In paper, price* 1/-, *by post* 1/2.

Goat, Book of the. Containing Full Particulars of the Various Breeds of Goats, and their Profitable Management. With many Plates. By H. STEPHEN HOLMES PEGLER. Third Edition, with Engravings and Coloured Frontispiece. *In cloth gilt, price* 4/6, *by post* 4/10.

Goat-Keeping for Amateurs: Being the Practical Management of Goats for Milking Purposes. Abridged from "The Book of the Goat." Illustrated. *In paper, price* 1/-, *by post* 1/2.

Grape Growing for Amateurs. A Thoroughly Practical Book on Successful Vine Culture. By E. MOLYNEUX. Illustrated. *In paper, price* 1/-, *by post* 1/2.

Greenhouse Construction and Heating. Containing Full Descriptions of the Various Kinds of Greenhouses, Stove Houses, Forcing Houses, Pits and Frames, with Directions for their Construction; and also Descriptions of the Different types of Boilers, Pipes, and Heating Apparatus generally, with Instructions for Fixing the Same. By R. C. RAVENSCROFT. Illustrated. *In cloth gilt, price* 3/6, *by post* 3/9.

Digitized by Google

Greenhouse Management for Amateurs. The Best Greenhouses and Frames, and How to Build and Heat them, Illustrated Descriptions of the most suitable Plants, with general and Special Cultural Directions, and all necessary information for the Guidance of the Amateur. By W. J. MAY. Second Edition, Revised and Enlarged. Magnificently illustrated. *In cloth gilt, price* 5/-, *by post* 5/4.

Guinea Pig, The, for Food, Fur, and Fancy. Its Varieties and its Management. By C. CUMBERLAND, F.Z.S. Illustrated. *In paper, price* 1/-, *by post* 1/2. *In cloth gilt, with coloured frontispiece, price* 2/6, *by post* 2/9.

Handwriting, Character Indicated by. With Illustrations in Support of the Theories advanced, taken from Autograph Letters, of Statesmen, Lawyers, Soldiers, Ecclesiastics, Authors, Poets, Musicians, Actors, and other persons. Second Edition. By R. BAUGHAN. *In cloth gilt, price* 2/6, *by post* 2/9.

Hardy Perennials and Old-fashioned Garden Flowers. Descriptions, alphabetically arranged, of the most desirable Plants for Borders, Rockeries, and Shrubberies, including Foliage, as well as Flowering Plants. By J. WOOD. Profusely Illustrated. *In cloth gilt, price* 3/6, *by post* 3/9.

Hawk Moths, Book of British. A Popular and Practical Manual for all Lepidopterists. Copiously illustrated in black and white from the Author's own exquisite Drawings from Nature. By W. J. LUCAS, B.A. *In cloth gilt, price* 3/6, *by post* 3/9.

Home Medicine and Surgery. A Dictionary of Diseases and Accidents, and their Proper Home Treatment. For Family Use. By W. J. MACKENZIE, M.D. Illustrated. *In paper, price* 1/-, *by post* 1/2.

Horse-Keeper, The Practical. By GEORGE FLEMING, C.B., LL.D., F.R.C.V.S., late Principal Veterinary Surgeon to the British Army, and Ex-President of the Royal College of Veterinary Surgeons. *In cloth gilt, price* 3/6, *by post* 3/10.

Horse-Keeping for Amateurs. A Practical Manual on the Management of Horses, for the guidance of those who keep one or two for their personal use. By FOX RUSSELL. *In paper, price* 1/-, *by post* 1/2 ; *cloth gilt,* 2/-, *by post* 2/3.

Horses, Diseases of: Their Causes, Symptoms, and Treatment. For the use of Amateurs. By HUGH DALZIEL. *In paper, price* 1/-, *by post* 1/2 ; *cloth gilt,* 2/-, *by post* 2/3.

Incubators and their Management. By J. H. SUTCLIFFE. New Edition, Revised and Enlarged. Illustrated. *In paper, price* 1/-, *by post* 1/2.

Inland Watering Places. A Description of the Spas of Great Britain and Ireland, their Mineral Waters, and their Medicinal Value, and the attractions which they offer to Invalids and other Visitors. Profusely Illustrated. A Companion Volume to "Seaside Watering Places." *In cloth gilt, price* 2/6, *by post* 2/10.

Jack All Alone. Being a Collection of Descriptive Yachting Reminiscences. By FRANK COWPER, B.A., Author of "Sailing Tours." Illustrated. *In cloth gilt, price* 3/6, *by post* 3/10.

Journalism, Practical: How to Enter Thereon and Succeed. A book for all who think of "writing for the Press." By JOHN DAWSON. *In cloth gilt, price* 2/6, *by post* 2/9.

Kennel Management, Practical. A Complete Treatise on the Proper Management of Dogs for the Show Bench, the Field, or as Companions, with a chapter on Diseases—their Causes and Treatment. By W. D. DRURY, assisted by well-known Specialists. Illustrated. *In cloth* 10/6, *by post* 11/-.

Lace, A History of Hand-Made. By MRS. E. NEVILL JACKSON. With Supplementary Remarks by SIGNOR ERNESTO JESURUM. Exquisitely Illustrated with numerous high-class Engravings of Old and Valuable Laces and their application to Dress as shown in Portraits and Monochrome and Sepia Plates of great beauty. *In crown 4to, cloth gilt, price* 12/- *net, by post* 13/-. *Edition de Luxe, on large paper, containing 12 specimens of Real Lace, handsomely bound in full leather, gilt, price £1 4/- net, by post £1 5/6.* (A few copies only left at this price, after which there are 60 at £2 5/-, when the entire stock will be exhausted.)

Digitized by Google

Lawn Tennis, Lessons in. A New Method of Study and Practise for Acquiring a Good and Sound Style of Play. With Exercises. By R. H. MILES. Illustrated. *In paper, price 1/-, by post 1/2.*

Laying Hens, How to Keep and to Rear Chickens in Large or small Numbers, in Absolute Confinement, with perfect Success. By MAJOR G. F. MORANT. *In paper, price 6d., by post 7d.*

Library Manual, The. A Guide to the Formation of a Library, and the Values of Rare and Standard Books. By J. H. SLATER, Barrister-at-Law. Third Edition, Revised and Greatly Enlarged. *In cloth gilt, price 7/6 net, by post 7/10.*

Magic Lanterns, Modern. A Guide to the Management of the Optical Lantern, for the Use of Entertainers, Lecturers, Photographers, Teachers, and others. By R. CHILD BAYLEY. *In paper, price 1/-, by post 1/2.*

Marqueterie Wood-Staining for Amateurs. A Practical Handbook to Marqueterie Wood-staining, and Kindred Arts. By ELIZA TURCK. Profusely Illustrated. *In paper, price 1/-, by post 1/2.*

Mice, Fancy: Their Varieties, Management, and Breeding. Third Edition, with additional matter and Illustrations. *In coloured wrapper representing different varieties, price 1/-, by post 1/2.*

Millinery, Handbook of. A Practical Manual of Instruction for Ladies. Illustrated. By MME. ROSÉE, Court Milliner, Principal of the School of Millinery *In paper, price 1/-, by post 1/2.*

Model Yachts and Boats: Their Designing, Making, and Sailing. Illustrated with 118 Designs and Working Diagrams. By J. DU V. GROSVENOR. *In leatherette, price 5/-, by post 5/3.*

Mountaineering, Welsh. A Complete and Handy Guide to all the Best Roads and Bye-Paths by which the Tourist should Ascend the Welsh Mountains. By A. W. PERRY. With Numerous Maps. *In cloth gilt, price 2/6, by post 2/9.*

Mushroom Culture for Amateurs. With Full Directions for Successful Growth in Houses, Sheds, Cellars, and Pots, on Shelves, and Out of Doors. By W. J. MAY. Illustrated. *In paper, price 1/-, by post 1/2.*

Needlework, Dictionary of. An Encyclopædia of Artistic, Plain, and Fancy Needlework; Plain, practical, complete, and magnificently Illustrated. By S. F. A. CAULFEILD and B. C. SAWARD. *In demy 4to, 528pp, 829 Illustrations, extra cloth gilt, gilt edges, cushioned bevelled boards, price 21/- net, by post 21/9; with COLOURED PLATES, elegant satin brocade cloth binding, and coloured edges, 31/6 net, by post 32/-.*

Orchids: Their Culture and Management, with Descriptions of all the Kinds in General Cultivation. Illustrated by Coloured Plates and Engravings. By W. Watson, Assistant Curator, Royal Botanic Gardens, Kew; Assisted by W. Bean, Foreman, Royal Gardens, Kew. Second Edition, Revised and with Extra Plates. *In cloth gilt and gilt edges, price £1 1/- net, by post £1/1/6.*

Painters and Their Works. A Work of the Greatest Value to Collectors and such as are interested in the Art, as it gives, besides Biographical Sketches of all the Artists of Repute (not now living) from the 13th Century to the present date, the Market Value of the Principal Works Painted by Them, with Full Descriptions of Same. *In 3 vols., cloth gilt, price 36/- net, by post 38/3.*

Painting, Decorative. A practical Handbook on Painting and Etching upon Textiles, Pottery, Porcelain, Paper, Vellum, Leather, Glass, Wood, Stone, Metals, and Plaster, for the Decoration of our Homes. By B. C. SAWARD. *In cloth gilt, price 3/6, by post 3/9.*

Palmistry, Life Studies in. The hands of Notable Persons read according to the practice of Modern Palmistry. By I. OXENFORD. Illustrated with 41 Full-Page Plates. *In 4to, cloth gilt, price 5/-, by post 5/4.*

Palmistry Modern. By I. OXENFORD, Author of Life Studies in Palmistry. Numerous Original Illustrations by L. WILKINS. *In cloth gilt, price 2/6, by post 2/9.*

Paper Work, Instructive and Ornamental. A practical book on the making of flowers and many other articles for artistic decoration, including a graduated course of Paper Folding and Cutting for children five to twelve years of age. Especially useful as preparatory exercises to the making of artificial flowers in silk and velvet, increasing that dexterity of hand and niceness of finish so necessary to that work. By Mrs. L. WALKER. Fully Illustrated. *In crown 4to, cloth gilt, 3/6, by post 3/10.*

Digitized by Google

Parcel Post Dispatch Book (registered). An invaluable book for all who send parcels by post. Provides Address Labels, Certificate of Posting, and Records of Parcels Dispatched. By the use of this book parcels are insured against loss or damage to the extent of £2. Authorised by the Post Office. *Price 1/-, by post 1/2, for 100 parcels; larger sizes if required.*

Parrakeets, Popular. How to Keep and Breed Them. By DR. W. T. GREENE, M.D., M.A., F.Z.S., &c. *In paper, price 1/-, by post 1/2.*

Parrot, The Grey, and How to Treat it. By W. T. GREENE, M.D., M.A., F.Z.S., &c. *In paper, price 1/-, by post 1/2.*

Parrots, The Speaking. The Art of Keeping and Breeding the principal Talking Parrots in Confinement. By DR. KARL RUSS. Illustrated. *In cloth gilt, price 3/6, by post 3/9.*

Patience, Games of, for one or more Players. How to Play 173 different Games of Patience. By M. WHITMORE JONES. Illustrated. Series I., 39 games; Series II., 34 games; Series III., 33 games; Series IV., 37 games; Series V., 30 games. *Each, in paper, 1/-, by post 1/2. The five bound together, in cloth gilt, price 6/-, by post 6/4. In full leather, solid gilt edges, 10/6 net, by post 11/6.*

Patience Cards, for Games of. Two dainty Packs (2¾in. by 2in.) for playing the Various Games of Patience, in Case. They are of the best make and finish, and of a very pretty and convenient size. *Price 2/6, by post 2/9.*

Pedigree Record, The. Being Part I. of "The Breeders' and Exhibitors' Record," for the Registration of Particulars concerning Pedigrees of Stock of every Description. By W. K. TAUNTON. *In cloth gilt, price 2/6, by post 2/9.*

Pheasant-Keeping for Amateurs. A Practical Handbook on the Breeding, Rearing, and General Management of Fancy Pheasants in Confinement. By GEO. HORNE. Fully Illustrated. *In cloth gilt, price 3/6, by post 3/9.*

Photographic Printing Processes, Popular. A Practical Guide to Printing with Gelatino-Chloride, Artigue, Platinotype, Carbon, Bromide, Collodio-Chloride, Bichromated Gum, and other Sensitised Papers. By H. MACLEAN, F.R.P.S. Illustrated. *In cloth gilt, price 2/6, by post 2/10.*

Photography (Modern) for Amateurs. Fourth Edition. Revised and Enlarged. By J. EATON FEARN. *In paper, price 1/-, by post 1/2.*

Picture-Frame Making for Amateurs. Being Practical Instructions in the Making of various kinds of Frames for Paintings, Drawings, Photographs, and Engravings. By the REV. J. LUKIN. Illustrated. *In paper, price 1/-, by post 1/2.*

Pig, Book of the. The Selection, Breeding, Feeding, and Management of the Pig; the Treatment of its Diseases; The Curing and Preserving of Hams, Bacon, and other Pork Foods; and other information appertaining to Pork Farming. By PROFESSOR JAMES LONG. Fully Illustrated with Portraits of Prize Pigs, Plans of Model Piggeries, &c. *In cloth gilt, price 10/6, by post 10/11.*

Pig-Keeping, Practical: A Manual for Amateurs, based on personal Experience in Breeding, Feeding, and Fattening; also in Buying and Selling Pigs at Market Prices. By R. D. GARRATT. *In paper, price 1/-, by post 1/2.*

Pigeon-Keeping for Amateurs. A Complete Guide to the Amateur Breeder of Domestic and Fancy Pigeons. By J. C. LYELL. Illustrated. *In cloth gilt, price 2/6, by post 2/9; in paper, price 1/-, by post 1/2.*

Poker Work, A Guide to, including Coloured Poker Work and Relief Turning. A Practical Manual for Amateurs, containing a full Description of the necessary Tools, and Instructions for their use. By W. D. THOMPSON. Illustrated. *In paper, 1/- net, by post 1/2.*

Polishes and Stains for Woods: A Complete Guide to Polishing Woodwork, with Directions for Staining, and Full Information for Making the Stains, Polishes, &c., in the simplest and most satisfactory manner. By DAVID DENNING. *In paper 1/-, by post 1/2.*

Pool, Games of. Describing Various English and American Pool Games, and giving the Rules in full. Illustrated. *In paper, price 1/-, by post 1/2.*

Digitized by Google

Portraiture, Home, for Amateur Photographers. Being the result of many years' incessant work in the production of Portraits "at home." By P. R. SALMON (RICHARD PENLAKE), Editor of *The Photographic News*. Fully Illustrated. *In cloth gilt, price* 2/6, *by post* 2/9.

Postage Stamps, and their Collection. A Practical Handbook for Collectors of Postal Stamps, Envelopes, Wrappers, and Cards. By OLIVER FIRTH, Member of the Philatelic Societies of London, Leeds, and Bradford. Profusely Illustrated. *In cloth gilt, price* 2/6, *by post* 2/10.

Postage Stamps of Europe, The Adhesive: A Practical Guide to their Collection, Identification, and Classification. Especially designed for the use of those commencing the Study. By W. A. S. WESTOBY. Beautifully Illustrated. *In* 2 *vols., price* 15/- *net, by post* 15/6. (*Vol. I., A-I; Vol. II. I-Z.*)

Postmarks, History of British. With 350 Illustrations and a List of Numbers used in Obliterations. By J. H. DANIELS *In cloth gilt, price* 2/6 *net, by post* 2/9.

Pottery and Porcelain, English. A Guide for Collectors. Handsomely Illustrated with Engravings of Specimen Pieces and the Marks and Monograms used by the different Makers. New Edition, Revised and Enlarged. By the REV. E. A. DOWNMAN. *In cloth gilt, price* 3/6 *net, by post* 3/9.

Poultry-Farming, Profitable. Describing in Detail the Methods that Give the Best Results, and pointing out the Mistakes to be Avoided. By J. H. SUTCLIFFE. Illustrated. *In paper, price* 1/-, *by post* 1/2.

Poultry-Keeping, Popular. A Practical and Complete Guide to Breeding and Keeping Poultry for Eggs or for the Table. By F. A. MACKENZIE. Second Edition, with Additional Matter and Illustrations. *In paper, price* 1/-, *by post* 1/2.

Rabbit, Book of the. A Complete Work on Breeding and Rearing all Varieties of Fancy Rabbits, giving their History, Variations, Uses, Points, Selection, Mating, Management, &c., &c. SECOND EDITION. Edited by KEMPSTER W. KNIGHT. Illustrated with Coloured and other Plates. *In cloth gilt, price* 10/6, *by post* 10/11.

Rabbits, Diseases of: Their Causes, Symptoms, and Cure. With a Chapter on THE DISEASES OF CAVIES. Reprinted from "The Book of the Rabbit" and "The Guinea Pig for Food, Fur, and Fancy." *In paper, price* 1/-, *by post* 1/2.

Rabbits for Prizes and Profit. The Proper Management of Fancy Rabbits in Health and Disease, for Pets or the Market, and Descriptions of every known Variety, with Instructions for Breeding Good Specimens. By CHARLES RAYSON. Illustrated. *In cloth gilt, price* 2/6, *by post* 2/9. Also in Sections, as follows:

General Management of Rabbits. Including Hutches, Breeding, Feeding, Diseases and their Treatment, Rabbit Courts, &c. Fully Illustrated. *In paper, price* 1/-, *by post* 1/2.

Exhibition Rabbits. Being descriptions of all Varieties of Fancy Rabbits, their Points of Excellence, and how to obtain them. Illustrated. *In paper, price* 1/-, *by post* 1/2.

Roses for Amateurs. A Practical Guide to the Selection and Cultivation of the best Roses. Second Edition, with Many Plates. By the REV. J. HONYWOOD D'OMBRAIN, Hon. Sec. Nat. Rose Soc. *In paper, price* 1/-, *by post* 1/2.

Sailing Guide to the Solent and Poole Harbour, with Practical Hints as to Living and Cooking on, and Working a Small Yacht. By LIEUT.-COL. T. G. CUTHELL. Illustrated with Coloured Charts. *In cloth gilt, price* 2/6, *by post* 2/9.

Sailing Tours. The Yachtman's Guide to the Cruising Waters of the English and Adjacent Coasts. With Descriptions of every Creek, Harbour, and Roadstead on the Course. With numerous Charts printed in Colours, showing Deep water, Shoals, and Sands exposed at low water, with sounding. By FRANK COWPER, B.A. *In crown* 8vo, *cloth gilt.*

Vol. I. The Coasts of Essex and Suffolk, from the Thames to Aldborough. Six Charts. *Price* 5/-, *by post* 5/3.

Digitized by Google

Vol. II. The South Coast, from the Thames to the Scilly Islands. Twenty-five Charts. New and Revised Edition. *Price* 7/6, *by post* 7/10.

Vol. III. The Coast of Brittany, from L'Abervrach to St. Nazaire, and an account of the Loire. Twelve Charts. *Price* 7/6, *by post* 7/10.

Vol. IV. The West Coast, from Land's End to Mull of Galloway, including the East Coast of Ireland. Thirty Charts. *Price* 10/6, *by post* 10/10.

Vol. V. The Coasts of Scotland and the N.E. of England down to Aldborough. Forty Charts. *Price* 10/6, *by post* 10/10.

St. Bernard Stud Book. Edited by HUGH DALZIEL. 2 Vols., containing Pedigrees of over 1800 Dogs. *In cloth gilt, price* 3/6 *each, by post* 3/9 *each.*

Sea-Fishing for Amateurs. Practical Instructions to Visitors at Seaside Places for Catching Sea-Fish from Pier-heads, Shore, or Boats, principally by means of Hand Lines, with a very useful List of Fishing Stations, the Fish to be caught there, and the Best Seasons. By FRANK HUDSON. Illustrated. *In paper, price* 1/-, *by post* 1/2.

Sea-Life, Realities of. Describing the Duties, Prospects, and Pleasures of a Young Sailor in the Mercantile Marine. By H. E. ACRAMAN COATE. With a Preface by J. R. DIGGLE, M.A., M.L.S.B. *In cloth gilt, price* 3/6, *by post* 3/10.

Seaside Watering Places. A description of the Holiday Resorts on the Coasts of England and Wales, the Channel Islands, and the Isle of Man, giving full particulars of them and their attractions, and all information likely to assist persons in selecting places in which to spend their Holidays, according to their individual tastes. Illustrated. Twenty-fourth Year of Issue. *In cloth gilt, price* 2/6, *by post* 2/10.

Sea Terms, a Dictionary of. For the use of Yachtsmen, Voyagers, and all who go down to the sea in big or little ships. By A. ANSTED. Fully Illustrated. *In cloth gilt, price* 5/- *net, by post* 5/9.

Shadow Entertainments, and How to Work them: being Something about Shadows, and the way to make them Profitable and Funny. By A. PATTERSON. Illustrated. *In paper, price* 1/-, *by post* 1/2.

Sheep Raising and Shepherding. A Handbook of Sheep Farming. By W. J. MALDEN, Principal of the Agricultural College, Ucktield. Illustrated. *Cloth gilt, price* 3/6, *by post* 3/9.

Sheet Metal, Working in: Being Practical Instructions for Making and Mending Small Articles in Tin, Copper, Iron, Zinc, and Brass. By the Rev. J. LUKIN, B.A. Illustrated. Third Edition. *In paper, price* 1/-, *by post* 1/1.

Show Record, The. Being Part III. of "The Breeders' and Exhibitors' Record," for the Registration of Particulars concerning the Exhibition of Pedigree stock of every Description. By W. K. TAUNTON. *In cloth gilt, price* 2/6, *by post* 2/9.

Skating Cards: An Easy Method of Learning Figure Skating, as the Cards *can be used on the Ice. In cloth case, price* 2/6, *by post* 2/9; *leather, price* 3/6, *by post* 3/9. A cheap form is issued printed on paper and made up as a small book, *price* 1/-, *by post* 1/1.

Sleight of Hand. A Practical Manual of Legerdemain for Amateurs and Others. New Edition, Revised and Enlarged. Illustrated. By E. SACHS. *In cloth gilt, price* 6/6, *by post* 6/10.

Solo Whist. It Whys and Wherefores. A Progressive and Clear Method of Explanation and Illustration of the Game, and how to Play it Successfully. With Illustrative Hands printed in Colours. By C. J. MELROSE. *In cloth gilt, price* 3/6, *by post* 3/10; *in half leather, gilt top,* 5/6 *net, by post* 6/-.

Sporting Books, Illustrated. A Descriptive Survey of a Collection of English Illustrated Works of a Sporting and Racy Character, with an Appendix of Prints relating to Sports of the Field. The whole valued by reference to Average Auction Prices. By J. H. SLATER, Author of "Library Manual," "Engravings and Their Value," &c. *In cloth gilt, price* 7/6 *net, by post* 7/10.

Digitized by Google

Stud Record, The. Being Part II. of "The Breeders' and Exhibitors' Record," for the Registration of Particulars concerning Pedigree Stock of every Description. By W. K. TAUNTON. *In cloth gilt, price* 2/6, *by post* 2/9.

Taxidermy, Practical. A Manual of Instruction to the Amateur in Collecting, Preserving, and Setting-up Natural-History Specimens of all kinds. With Examples and Working Diagrams. By MONTAGU BROWNE, F.Z.S., Curator of Leicester Museum. Second Edition. *In cloth gilt, price* 7/6, *by post* 7/10.

Tomato and Fruit Growing as an Industry for Women. Lectures given at the Forestry Exhibition, Earl's Court, during July and August, 1893. By GRACE HARRIMAN, Practical Fruit Grower and County Council Lecturer. *In paper, price* 1/-, *by post* 1/1.

Tomato Culture for Amateurs. A Practical and very Complete Manual on the subject. By B. C. RAVENSCROFT. Illustrated. *In paper, price* 1/-, *by post* 1/1.

Trapping, Practical: Being some Papers on Traps and Trapping for Vermin, with a Chapter on General Bird Trapping and Snaring. By W. CARNEGIE. *In paper, price* 1/-, *by post* 1/2.

Turning Lathes. A Manual for Technical Schools and Apprentices. A Guide to Turning, Screw-cutting, Metal-spinning, &c. Edited by JAMES LUKIN, R.A. Third Edition. With 194 Illustrations. *In cloth gilt, price* 3/-, *by post* 3/3.

Vamp, How to. A Practical Guide to the Accompaniment of Songs by the Unskilled Musician. With Examples. *In paper, price* 9d., *by post* 10d.

Vegetable Culture for Amateurs. Containing Concise Directions for the Cultivation of Vegetables in small Gardens so as to insure Good Crops. With Lists of the Best Varieties of each Sort. By W. J. MAY. Illustrated. *In paper, price* 1/-, *by post* 1/2.

Ventriloquism, Practical. A thoroughly reliable Guide to the Art of Voice Throwing and Vocal Mimicry, Vocal Instrumentation, Ventriloquist Figures, Entertaining, &c. By ROBERT GANTHONY. Numerous Illustrations. *In cloth gilt, price* 2/6, *by post* 2/9.

Violins (Old) and their Makers. Including some References to those of Modern Times. By JAMES M. FLEMING. Illustrated with Facsimiles of Tickets, Sound-Holes, &c. *In cloth gilt, price* 6/6 *net, by post* 6/10.

Violin School, Practical, for Home Students. Instructions and Exercises in Violin Playing, for the use of Amateurs, Self-Learners, Teachers, and others. With a Supplement on "Easy Legato Studies for the Violin." By J. M. FLEMING. *Demy* 4*to, cloth gilt, price* 9/6, *by post* 10/2. Without Supplement, *price* 7/6, *by post* 8/-.

Vivarium, The. Being a Full Description of the most Interesting Snakes, Lizards, and other Reptiles, and How to Keep Them Satisfactorily in Confinement. By REV. G. C. BATEMAN. Beautifully Illustrated. *In cloth gilt, price* 7/6 *net, by post* 8/-.

War Medals and Decorations. A Manual for Collectors, with some account of Civil Rewards for Valour. By D. HASTINGS IRWIN. Revised and Enlarged Edition. Beautifully Illustrated. *In cloth gilt, price* 12/6 *net, by post* 12/10.

Whippet and Race-Dog, The: How to Breed, Rear, Train, Race, and Exhibit the Whippet, the Management of Race Meetings, and Original Plans of Courses. By FREEMAN LLOYD. *In cloth gilt, price* 2/6, *by post* 2/10.

Whist, Bridge: Its Whys and Wherefores. The Game taught by *Reason* instead of by Rule, on the same popular lines as "Scientific Whist" and "Solo Whist," and by the same author, C. J. MELROSE. With Illustrative Hands printed in Colours. *In cloth gilt, price* 3/6, *by post* 3/10; *in half leather, gilt top,* 5/6 *net, by post* 6/-.

Whist, Solo: Its Whys and Wherefores. A Progressive and Clear Method of Explanation and Illustration of the Game, and how to Play it Successfully. With Illustrative Hands printed in Colours. By C. J. MELROSE. *In cloth gilt, price* 3/6, *by post* 3/10; *in half leather, gilt top,* 5/6 *net, by post* 6/-.

Whist, Scientific: Its Whys and Wherefores. The Reader being taught by *Reason* rather than by arbitrary Rules. By C. J. MELROSE. With Illustrative Hands printed in Colours. *In cloth gilt, price* 3/6, *by post* 3/10; *in half leather, gilt top,* 5/6 *net, by post* 6/-.

Digitized by Google

Wild Birds, Cries and Call Notes of, described at length, and in many instances Illustrated by Musical Notation. By C. A. WITCHELL. *In paper, price 1/-, by post 1/2.*

Wildfowling, Practical: A Book on Wildfowl and Wildfowl Shooting. By HY. SHARP. The result of 25 years' experience of Wildfowl Shooting under all sorts of conditions of locality as well as circumstances. Profusely Illustrated. *Demy 8vo, cloth gilt, price 12/6 net, by post 12/10.*

Wild Sports in Ireland. Being Picturesque and Entertaining Descriptions of several visits paid to Ireland, with Practical Hints likely to be of service to the Angler, Wildfowler, and Yachtsman. By JOHN BICKERDYKE, Author of "The Book of the All-Round Angler," &c. Beautifully Illustrated from Photographs taken by the Author. *In cloth gilt, price 6/-, by post 6/4.*

Window Ticket Writing. Containing full instructions on the Method of Mixing and using the Various Inks, &c., required, Hints on Stencilling as applied to Ticket Writing, together with Lessons on Glass Writing, Japanning on Tin, &c. Especially written for the use of Learners and Shop Assistants. By WM. C. SCOTT. *In paper, price 1/-, by post 1/2.*

Wire and Sheet Gauges of the World. Compared and Compiled by C. A. B. PFEILSCHMIDT, of Sheffield. *In paper, price 1/-, by post 1/1.*

Wood Carving for Amateurs. Full instructions for producing all the different varieties of Carvings. SECOND EDITION. Edited by D. DENNING. *In paper, price 1/-, by post 1/2.*

Workshop Makeshifts. Being a Collection of Practical Hints and Suggestions for the use of Amateur Workers in Wood and Metal. By H. J. S. CASSALL. Fully Illustrated. *In cloth gilt, price 2/6, by post 2/9.*

BOOKS FOR ART AMATEURS.

Sent Post Free at the Each Discount Price Quoted.

ART IN NEEDLEWORK. A Book about Embroidery. By LEWIS F. DAY and MARY BUCKLE. Containing 80 full-page Plates and 45 Illustrations in the text. 5s. net. "No worker's table can be considered complete without a copy." (*Home Art Work.*)

ALPHABETS, OLD AND NEW. Containing 150 complete Alphabets, 30 Series of Numerals, &c. By LEWIS F. DAY. 3s. 6d. net. "Everyone who employs practical lettering will be grateful for 'Alphabets, Old and New.'" (*The Art Journal.*)

NATURE IN ORNAMENT. By LEWIS F. DAY. With 123 full-page Plates, and 192 Illustrations in the text. 10s. "A book more beautiful for its illustrations, or one more helpful to Students of Art, can hardly be imagined." (*Queen.*)

ANATOMY OF PATTERN. With 41 Illustrations, 3s.

PLANNING OF ORNAMENT. With 41 Illustrations, 3s.

APPLICATION OF ORNAMENT. With 48 Illustrations, 3s.

EVERY DAY ART. Introducing chapters on the Arts not Fine. Second Edition, with 70 Illustrations, 3s.

A MANUAL OF HISTORIC ORNAMENT. By RICHARD GLAZIER, A.R.I.B.A., Headmaster of the Manchester School of Art. With 500 Illustrations. 5s. net. "It simply abounds with illustrations, and forms a perfect treasury of designs." (*The Bookseller.*)

DECORATIVE FLOWER STUDIES. By J. FOORD. A Series of 40 charming Coloured Plates reproduced in facsimile of the original water-colour drawings, accompanied by 350 studies of details, with descriptive notes. "The author excels in the drawing of flowers." (*The Queen.*)

A HANDBOOK OF ORNAMENT. With 3,000 Illustrations. By F. S. MEYER. 10s. "A Library, a Museum, an Encyclopædia, and an Art School in one." (*Studio.*)

JAPANESE STUDIES OF BIRDS AND FLOWERS. By the celebrated Japanese Artist, WATANABE SEITEI. In three Books, 8vo, containing 131 full-page Illustrations, printed in tints. 10s. net.

JAPANESE STUDIES OF BIRDS, surrounded with foliage and flowers. By the well-known Japanese Artist, Bairei Kono. 3 volumes, containing 100 full-page Illustrations, 10s. net.

JAPANESE ENCYCLOPÆDIA OF DESIGN. 2 volumes, containing 2,000 Designs and Patterns. Each 2s.

HINTS ON WOOD-CARVING FOR BEGINNERS: By ELEANOR ROWE. Illustrated. 1s. "The most useful and practical small book on wood-carving we know of." (*Builder.*)

HINTS ON CHIP CARVING. By ELEANOR ROWE. 40 Illustrations. 1s.

A Descriptive List sent on application to the Publisher: B. T. BATSFORD, 94, HIGH HOLBORN, LONDON.

Digitized by Google

REAL BARGAINS (from A to Z) in

AUTOGRAPHS, Angoras, Ancones, Aviaries, Aquaria, Autoharps, Accordions, Angling Appliances;
BICYCLES, Birds, Banjoes, Bulbs, Brooches, Books, Bags, Beds, Bath Chairs, Boats, Billiards;
CANARIES, Cages, Cats, Cavies, Cattle, Curios, Clocks, Carriages, Cameras, Cinematographs;
DOGS, Deer, Doves, Donkeys, Ducks, Drums, Dulcimers, Dresses, Dressing Cases, Drawings;
ENGINES, English Terriers, Earrings, Engravings, Etchings, Entomology;
FLOWERS, Ferrets, Foxes, Fodder, Ferns, Fruit, Furs, Feathers, Frames, Furniture, Fretwork, Field Glasses;
GRAPHOPHONES, Game, Guinea Fowl, Geese, Goats, Guitars, Gramophones, Guns, Garden Appliances;
HORSES, Hen Coops, Harmoniums, Harps, Horns, Herbs, House Linen, Hats, Habits, Hurdles;
INCUBATORS, Invalid Carriages, Irish Terriers, Instruments, Iris, Insulators;
JEWELLERY, Jackets, Jacobins, Japanese Bantams, Jet, Journals, Jam;
KENNELS, Knitting Machines, Knives, Keepers, King Charles, Kit Bags;
LENSES, Leghorns, Layettes, Land, Launches, Lamps, Liveries, Library Fittings;
MOTOR CARS, Monkeys, Music, Mandolines, Medals, Mail Carts, Microscopes, Magazines, Magic Lanterns;
NEWSPAPERS, Natural History, Necklaces, Newfoundlands, Notes;
ORGANS, Opossums, Otters, Owls, Orpingtons, Organettes, Oboes, Orchids, Optical Lanterns;
PHOTOGRAPHIC APPARATUS, Provisions, Prints, Pheasants, Pigs, Pigeons, Plants, Poultry, Plants;
QUOITS, Quilts, Quails, Quilts, Quinces, Quaking Grass, Quinine, Quiver;
RIFLES, Rabbits, Rats, Retrievers, Roses, Rings, Rugs, Revolvers, Residences;
STAMPS, Swans, Squirrels, Stable Appliances, Seeds, Screens, Suits, Safes, Shooting Appliances;
TYPEWRITERS, Turkeys, Terriers, Trumpets, Trombones, Tubers, Trees, Toys, Tools, Telescopes, Tricycles;
UMBRELLAS, Uniforms, Underclothing, Urns, Upholstery, Union Jacks;
VIOLINS, Violoncellos, Violas, Vegetables, Vehicles, Varnish;
WATCHES, Welsh Terriers, Waterfowl, Wyandottes, Waterproofs, Washing Machines;
XYLONITE ARTICLES, Xylophones, Xeriffs, Xysters, Xiphiens;
YACHTS, Yorkshire Terriers, Yokohama Fowls, Yawls, Yard Dogs;
ZITHERS, Zebra Finches, and Zoological Subjects generally

will be found in every issue of **The Bazaar, Exchange and Mart,**

which is **THE** Amateur's Paper for Practical Articles and Advice on all Useful Subjects.

To be had at all Booksellers and Newsagents, Price 2d.

Digitized by Google

SIMMONS & WATERS,

Book and Print Dealers,

10, SPENCER STREET, LEAMINGTON SPA.

Catalogues of Second-hand Books issued at regular intervals and sent post free to Book Buyers.

Books Bought:

Either

ENTIRE LIBRARIES

or in

SMALL QUANTITIES.

Correspondence invited.

LIBRARIES CATALOGUED, ARRANGED, OR VALUED.

Old Prints and Engravings Bought and Sold.

Catalogues of Engravings issued frequently and sent Free to Collectors.

ESTABLISHED IN LEAMINGTON IN 1845.

Digitized by Google

TO LOVERS OF THE GARDEN.

A SPECIAL OFFER!

A 4 Guinea Work for 9/- down

And Balance in Monthly Instalments.

THE most Popular Work on Horticulture ever published is undoubtedly THE DICTIONARY OF GARDENING, and thousands of volumes have been sold here and in America.

The reason of the remarkable success that has attended this Work is not far to seek—it is very full, very accurate, superbly illustrated, and edited by one of the soundest of living authorities. It has been justly said of the Editor, Mr. George Nicholson, Curator of the Royal Gardens, Kew, that he is almost a unique example of a scientific botanist and a practical horticulturist under one hat.

The result is that the work issued under his care is a model of accuracy and completeness, both as regards its Cultural Directions and its Botanical Information. Added to this, the Editor has been assisted in particular sections—such as Orchids, Palms, Cacti, Ferns, Fruit, Insects, Plant Diseases, &c.—by Distinguished Specialists, *thus assuring, in the treatment of every subject, an excellence that has never before been approached.*

More than **3850** Genera and **20,400** Species of Garden Plants are described, with all necessary Instructions as to Cultivation and Propagation; Injurious Insects and Plant Diseases and their Treatment are also fully dealt with; over **3150** charming Illustrations are given, together with Full Indices to Plants for Special Purposes and Positions; for Colours, Height, &c., as a Guide to Planting; a Pronouncing Dictionary of *Plant Names*; a Dictionary of Common Names, and other features of the utmost practical value to all gardeners.

No working gardener who takes the least pride in his profession, or who is ambitious of succeeding in it, can **afford** to be without THE DICTIONARY OF GARDENING; and to any Amateur with a garden beyond the smallest (if he takes any personal interest whatever in it), THE DICTIONARY OF GARDENING is **absolutely indispensable.**

THE DICTIONARY OF GARDENING is published for this Special Offer in

5 HANDSOME LARGE POST QUARTO VOLS., IN HALF PERSIAN,

cloth sides, marble edges, at **Four Guineas,** and the Special Offer is to supply this Edition, Carriage Paid and Complete,

for 9/-

down, the balance being payable in **Monthly Instalments of 4s. 6d. each.**

This Special Edition includes the new **CENTURY SUPPLEMENT,** which gives particulars of all the most Recent Horticultural Introductions and the Newest Discoveries respecting Diseases, Insects, and Cultivation.

Form of

SPECIAL ORDER.

To MR. L. UPCOTT GILL,
170, Strand,
London, W.C.

Please send me, carriage paid, the Special Offer Edition of "Nicholson's Dictionary of Gardening," in 5 vols., half bound in Persian, published at £4 4s. 0d., for which I enclose 9s. I undertake to pay the balance in Monthly Instalments, of 4/6 each,* and not to dispose of the said books until all the instalments are paid.

Name and Address .....

.....

.....

.....

Date .....

* NOTE.—10 per cent. for cash can be deducted from the amount if the whole price is paid at time of order, or 3d. may be deducted from any instalment which is paid at least a month before due.

Digitized by Google

SOFT, DELICATE SKIN.

A beautiful complexion and face, neck, and arms of matchless whiteness are insured to those ladies who use

ROWLAND'S KALYDOR

the most curative, healing, and refreshing milk ever used. It preserves the skin from all trying changes of weather, removes freckles, tan, redness and roughness; soothes and heals irritation, cutaneous eruptions more effectually than any other preparation. Warranted harmless. Bottles 2/3 and 4/6.

ROWLAND'S MACASSAR OIL

prevents the hair falling off or becoming dry, cures baldness, eradicates scurf; also in golden colour for fair and golden hair. Sizes, 3/6, 7/-, 10/6.

ROWLAND'S ODONTO imparts a pearl-like whiteness to the teeth, eradicates decay, and preserves the teeth.

Sold by Stores, Chemists, Hairdressers, and **A. ROWLAND & SONS, Hatton Garden, London.**

A HISTORY OF

Hand-Made Lace.

BY

MRS. E. NEVILL JACKSON,

WITH SUPPLEMENTARY REMARKS BY

SIGNOR ERNESTO JESURUM.

Exquisitely Illustrated with numerous High-class Engravings of Old and Valuable Laces and their Application to Dress as shown in Portraits and Monochrome and Sepia Plates of great beauty. *In cloth gilt,* **18/-** *net, by post* **19/-** *net.*

EDITION DE LUXE, Printed on Large Paper, and Bound in Full Persian, with Handsome Design in Gilt, and Solid Gilt Edges, containing 12 Specimens of Real Lace. Price **£4 4/-** net, by post **£4/5/6** net. (The last Sixty Copies of this Edition will be advanced to **£5 5/-** net per copy.)

LONDON: L. UPCOTT GILL, 170, STRAND, W.C.

Digitized by Google

A 3½ Guinea Work for 7/6 down.

The "Encyclopædia of Practical Cookery"

Is undoubtedly at once the most exhaustive, the most accurate, the most practical, and the most novel book of the kind in the language; and the Editor of the *World* in his review says, "this claim would seem to be incontestable."

In Illustrations alone this work is far ahead of all others. There are a large number of Coloured Plates, which for their artistic design and beauty of printing have never been equalled in any book devoted to Cookery, and in addition there are numerous Monochrome Plates and upwards of **2300** splendid Engravings in the text itself.

Incredible pains and very large sums of money have been expended upon the work to make it in every way worthy of the position for which it is designed, and we believe that in the result we have produced a book that is without parallel, and one that is invaluable alike to the accomplished Chef, the Lady of the House, or the intelligent Plain Cook.

This Magnificent Work is published in 4 Quarto Vols., Handsomely Bound in Half Persian, Bevelled Boards, and Marble Edges, and would form a splendid addition to any Library.

A **SPECIAL OFFER** is now made to send the *entire work* to any responsible person, complete and carriage paid,

for 7/6

and a promise to pay the balance in equal monthly instalments of 3/6. Thus, for a merely nominal sum the most sumptuous and thorough work of its kind can be secured at once, while future payments are so small and so far apart that they would not be burdensome to anyone.

A Full Prospectus can be had on application, and the Book itself seen at the Publisher's Offices.

To Mr. L. Upcott Gill, 170, Strand, London.

Special Order Form (No. 1).

Please send me at once, carriage free, the "Encyclopædia of Practical Cookery," in 4 quarto vols., bound in Half Persian, in accordance with your advt. I enclose 7/6, and will pay the balance of the price in equal monthly instalments of 3/6, commencing one month from the delivery to me of the books, and I will not dispose of the books until the whole of the instalments have been paid without the consent in writing of the Publisher.

Name (Give title—Mrs., Miss, &c.) and Address .....

Date .....

NOTE.—The whole or any instalments can be paid in advance, when 10% discount can be deducted.

Digitized by Google

Edward Baker,

Bookseller & Publisher,

14 & 16, John Bright St., Birmingham.

Booksellers in Birmingham.—"Edward Baker, of John Bright Street, Birmingham, is the best Second-hand Bookseller in that Town."—*Bazaar, Exchange and Mart.*

The following Catalogues now ready, post free:—

Topography, History, Geography, and Travels relating to Europe, Africa, America, Asia, and Australia, and a large selection relating to English Counties. 64 pages. N.B.—This Catalogue also contains a fine selection of Alpine Works suitable for the Collector. Over 1000 items.

Dramatic, Musical, and Poetical Works. Nearly 1000 items.

Educational Works. second-hand. 68 pages. Nearly 3000 items.

Medical Works for Students and Professional Men. 12 pages.

Medical Works (popular), Sexual, Social, and Medical Philosophy. 16 pages.

Arts and Trades. Works on Agriculture, Malting and Brewing, Gardening, Horses, Boiler Making, Smelting, and a host of other practical works. 18 pages.

Theology, Philosophy, and Allied Subjects. 32 pages.

Steam Navigation. The Navy and Allied Subjects. 40 pages.

Fiction Catalogue. Over 1000 items at bargain prices.

Miscellaneous Works. Sporting Works. First Editions. Specially Illustrated Works. Collectors' Handbooks, &c. 52 pages.

Catalogues on all Subjects frequently issued.

ALSO A

CATALOGUE OF RAILWAY ITEMS,

Bound in cloth, price 2s. nett. A Handbook to the various publications, documents, and charts connected with the rise and development of the Railway System, chiefly in Great Britain and Ireland, with Supplement, bound together, 224 pages.

Opinions of the Handbook:

"Of considerable interest."—*Engineering.*
"I congratulate you on your catalogue."—W. M. Ackworth, Esq.
"A very curious and interesting list."—Sam Timmins, Esq.

EDWARD BAKER, the well-known Bookseller, and better known Bookfinder (vide Editor *Bazaar*), offers his valuable services to anyone requiring rare and out of print books.

3000 BOOKS WANTED. First Editions, Sporting Books, Alpine Works, Sets of Standard Authors. Any Good Books, no matter what the subject.

20-Page List of Special Wants Post Free.

BAKER'S GREAT BOOKSHOP,

John Bright Street, BIRMINGHAM.

Digitized by Google

SPRATT'S PATENT

PUPPY BISCUITS

FOR ALL BREEDS.

SPRATT'S PATENT, LIMITED,

24 & 25, Fenchurch Street, LONDON, E.C.

Digitized by Google

Digitized by Google

Digitized by Google

HARVARD·COLLEGE·LIBRARY
GIFT·OF
DANIEL·B·FEARING
CLASS·OF·1882 · : · A·M·1911
OF·NEWPORT
·1915·
THIS·BOOK·IS·NOT·TO·BE·SOLD·OR·EXCHANGED

Digitized by Google